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PRODUCING REFINING PIPELINE ENGIN... R...

Published Every Thursday TULSA, OKLAHOMA, MAY 28, 1931 ...0 a

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Advertisers' Index on Page 9 Table of Contents on Page 10

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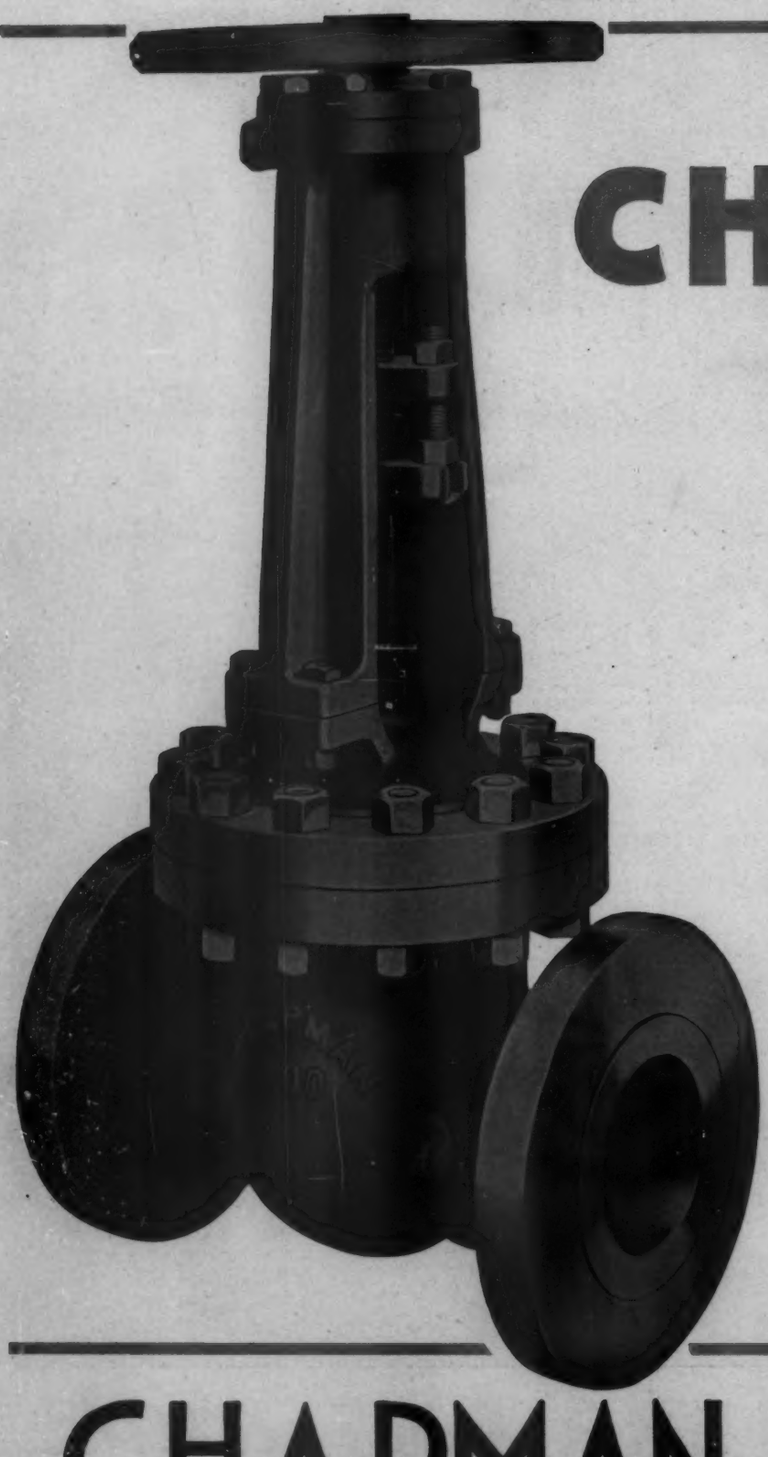

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CHAPMAN VALVES and FITTINGS

The ADVERTISERS' INDEX

A

Ajax Iron Works
Alco Products, Inc.
Allegeny Steel Co.
Allen Corp., The
Allis-Chalmers Mfg. Co.
Allis, Louis, Co., The
Allsteel Products Mfg. Co., Inc., The
Aluminum Co. of America
American Assn. of Petroleum Geologists
American Cable Co., Inc.
American Cast Iron Pipe Co.
American Iron & Machine Works Co.
American Meter Co. 55
American Radiator Co.
American Rolling Mill Co., The
American Schaeffer & Budenburg Corp.
American Sheet & Tin Plate Co.
American Stainless Steel Co.
American Steam Pump Co.
American Steel & Wire Co. 51
American Steel Works
American Tank & Equipment Corp.
American Well Works, The 98
Anchor Post Fence Co.
Armstrong Machine Works 89
Athey Truss Wheel Co.
Automotive Distillate Corp.
Axelson Mfg. Co., Ltd.
Ayer & Lord Tie Co. 99

B

Baash-Ross Tool Co.
Badger, E. B., & Sons Co.
Badgett Steam Lubricator Co.
Baker Oil Tools, Inc. 92
Barber-Greene Co.
Baroid Sales Co.
Barnickel, Wm. S., & Co.
Barnsdall Refineries, Inc.
Barrett Co., The
Beaumont Iron Works Co., The
Benson & Henderson Pipe Line Construction Co.
Bethlehem Steel Co.
Bigelow-Liptak Corp.
Bignall & Keeler Machine Works
Blackor Co.
Black, Sivalls & Bryson, Inc. 8
Bradford Motor Works, Inc.
Brauer Machine & Supply Co.
Braun, C. F., & Co.
Brewster Co., Inc., The 39
Bridgeport Machine Co. 31
Bristol Co., The
Broderick & Bascom Rope Co.
Broderick Co., The
Brown Instrument Co.
Buckeye Traction Ditcher Co.
Burford Oil Co.
Butler Mfg. Co. 7
Byers, A. M., Co.
Byron Jackson Co. 69

C

California Talc Co.
Campbell Co., J. A.
Carbondale Machine Co.
Carey, Philip Co., The
Caterpillar Tractor Co.
Chain Belt Co.
Champion & Barber, Inc.
Chaplin-Fulton Mfg. Co., The 92
Chapman Valve Mfg. Co., The
Inside Front Cover
Chicago Bridge & Iron Works
Clark Brothers Co.
Classified Wants 100-101-103
Cleveland Trencher Co., The
Colona Mfg. Co.
Colorado School of Mines
Columbian Rope Co. 81
Columbian Steel Tank
Columbus Forge & Iron Co., The
Consolidated Ashcroft Hancock Co., Inc.
Continental Supply Co., The
Cooper-Bessemer Corp., The
Corona Products, Inc.
Crane Co. 60-61
Crowe Laboratory Appliances

D

Darling Valve & Mfg. Co.
Dart, E. M., Mfg. Co.
Davey Compressor Co.
Davis Regulator Co. 74
Dearborn Chemical Co.
Dehydro, Inc.
Devine Mfg. Co., Inc., J. P.
Diamond Rubber Co.
Dixon Crucible Co., Joseph 93
Dodge Brothers Corp.
Doheny Stone Drill Co.
Donovan Boiler Works, Inc.
Dresser, S. R., Mfg. Co. 21
Driftmeter, Inc.
Du Pont de Nemours & Co., Inc., E. I.
Duriron Co., Inc., The

E

Eagle-Picher Lead Co.
East Texas Refining Co.
Economy Pump & Oil Tool Co., The
Edward Valve & Mfg. Co., Inc.
Elliott Mfg. Co.
Empire Oil & Refining Co.
Ethyl Gasoline Corp.
Exchange Banks of Tulsa

F

Falk Corp., The
Fenwick-Reddaway Mfg. Co.
Fisher Governor Co.
Foote Bros. Gear & Machine Co.
Fort Worth Chamber of Commerce
Foster Wheeler Corp.
Foxboro Co., Inc., The
Franklin Valveless Engine Co.
Frick-Reid Supply Corp.

G

Gardner-Denver Co.
Garlock Packing Co., The
Gaso Pump & Burner Mfg. Co.
Inside Back Cover
Gates Rubber Co.
General American Tank Car Corp.
General Electric Co. 49
Globe Oil Tools Co.
Goodrich, B. F., Rubber Co., The
Goodyear Tire & Rubber Co. 19
Goslin-Birmingham Mfg. Co.
Gott, H. P., Mfg. Co., Inc. 99
Goulds Pumps, Inc.
Granger Indicator Co.
Granite City Steel Co.
Grant Oil Tool Co.
Gray Processes Corp., The
Grinnell Co., Inc.
Griscom-Russell Co., The 107
Guiberson Corp., The 33
Gulf Refining Co. 75

H

Halliburton Oil Well Cementing Co. 37
Hamer Oil Tool Co., Ltd.
Hanlon-Waters, Inc.
Harrisburg Pipe & Pipe Bending Co.
Hazard Wire Rope Co.
Headley Emulsified Products Co. 87
Hedges-Walsh-Weidner Co., The
Heeter, Sons & Co., Inc., C. M.
Hercules Motors Corp.
Hercules Supply Co.
Hercules Tool Co.
Hewitt-Gutta Percha Co.
Heydrick Mapping Co. 127
Highland Iron & Steel Co., The
Hill, Hubbell & Co.
Hope Engineering Co.
Hopper Machine Works, Inc.
Hough, Charles N., Mfg. Co., The
Hughes Tool Co. Back Cover
Humble Oil & Refining Co.

I

Improved Steel Gas Engine Head Co.
Indian Refining Co. 99
Industrial Brownhoist Corp.
Industrial Dallas, Inc. 4
International Derrick & Equipment Co., The
International Harvester Co. of America.
International Nickel Co., Inc., The
International-Stacey Corp. 120
International Supply Co.

J

Jackson Co., Byron 69
Jackson Engineering Corp.
Jarecki Mfg. Co. 43
Jenkins Engineering Co.
Jenkins Bros.
Jerguson Gage & Valve Co.
Johns-Manville 80
Jones & Laughlin Steel Corp. 6

K

Kellogg, M. W., Co., The 47
Kennedy Valve Co., The 107
Kerotest Mfg. Co.
Key Boiler Equipment Co.
Kirk-Morrow Iron Works, Inc.
Kohler Co.
Koppers Co., The

L

Landis Machine Co., Inc.
Layne & Bowler Co. 121
Leader Iron Works, Inc.
Lemons, Inc., Henry L.
Leonard Construction Co.
Limbert & Co., George B.
Lincoln Electric Co.
Linde Air Products Co.
Littleford Bros. Co.
Longyear, E. J., Co.
Lucey Products Corp.
Ludlow Valve Mfg. Co.
Lufkin Foundry & Machine Co., The
Lummus Co., The
Lunkenheimer Co., The 52

Mc

McAlear Mfg. Co., The
McCord Radiator & Mfg. Co.
McEverlast, Inc.
McEvoy, J. H., & Co.
McIntosh & Seymour Corp.
McKee, Arthur G., & Co.

M

MacClatchie Mfg. Co. 79
Magnolia Petroleum Co.
Mair, D. S., Machinery Corp.
Maloney Tank Mfg. Co.
Marsh Gauge Pole Co. 98
Martin-Decker Corp.
Merco Nordstrom Valve Co.
Metric Metal Works 55
Michigan Valve & Foundry Co.
Mid-Continent Map Co.
Midwest Piping & Supply Co., Inc.
Mine Safety Appliance Co.
Moon Mfg. Co., The
Moore, Lee C., & Co., Inc. Front Cover
Moorlane Co., Inc.
Morris, I. P., & De La Vergne, Inc.
Moser Manufacturing Co.
Multiplex Display Fixture Co.
Munn & Co. 127
Murray Tool & Supply Co.

N

National Airoil Burner Co. 98
National Equipment Corp.
National Lead Co.
National Supply Co. 64-65
National Tank Co.
National Tank Seal Co.
National Transit Pump & Machine Co. 25
National Tube Co.
Naylor Pipe Co. 45
Neilan Co., Ltd.
North American Car Corp.
Northwest Engineering Co.

O

Oakite Products, Inc.
O'Brien Steel Construction Co.
Ohio Injector Co., The
Oil Conservation Engineering Co., The 86
Oil and Gas Journal, The
Oil Well Supply Co. 58
Oklahoma Gas & Electric Co.
Ottumwa Iron Works
Oxweld Acetylene Co.

P

Page Fence Assn.
Page Steel & Wire Co.
Parkersburg Machine Co. 116
Parkersburg Rig & Reel Co., The
Patch, W. N.
Patterson-Ballagh Corp.
Penberthy Injector Co. 23
Petroleum Engineering, Inc.
Petroleum Equipment Co. 98
Petroleum Iron Works Co.
Pickering Governor Co., The
Pittsburgh-Des Moines Steel Co. 79
Pittsburgh Equitable Meter Co. 57
Pittsburgh Screw & Bolt Corp.
Pittsburgh Steel Products Co.
Plymouth Cordage Co. 73
Pomona Pump Co.
Powell, William, Co.
Power Piping Co.
Prescott Co., The
Prest-O-Lite Co., Inc., The

P

Public Service Co.
Pure Oil Co., The
Pyle-National Co., The

R

Reading Iron Co.
Reading Steel Casting Co., Inc.
Regan Forge & Engineering Co.
Reid, Joseph, Gas Engine Co.
Reo Motor Car Co. 72
Republic Steel Corp. 40A-40B
Republic Supply Co. 35
Robinson Orifice Fittings Co.
Ross-Meehan Foundries Co.

S

St. Louis Cordage Mills 78
Shaffer Tool Works 117
Sheldon Machinery Corp.
Sherwin-Williams Co.
Smith, A. O., Corp. 2-3
Smith Separator Co.
Smooth-On Mfg. Co.
South Chester Tube Co.
Southwestern Construction Corp.
Southwestern Engineering Corp.
Spang & Co.
Spang, Chalfant & Co., Inc.
Sperry-Sun Well Surveying Co. 76
Star Drilling Machine Co.
Steiner, George
Sterling Steel Casting Co.
Stockham Pipe & Fittings Co.
Stoody Co.
Sullivan Machinery Co.
Sun Shipbuilding & Drydock Co.
Superheater Co., The
Sureshot Torpedo Co.

T

Tagliabue, C. J., Mfg. Co.
Taubman Supply Corp.
Taylor Forge & Pipe Works
Technical Products, Inc. 127
Texas Electric Service
Texas Steel Co.
Thompson, J. D., Jr. 127
Timken Roller Bearing Co., The 63
Titusville Iron Works Co.
Toledo Pipe Threading Machine Co., The 93
Trackson Co.
Tractor Truck Equipment Co.
Tretolite Co.
Trimont Mfg. Co.
Truscon Steel Co.
Tube Turns, Inc.
Tulsa Boiler & Machinery Co.

U

Union Carbide & Carbon Corp.
Union Wire Rope Co. 5
United Engineers & Constructors
Universal Oil Products Co. 28-29

V

Vacuum Oil Co.
Vellumoid Co., The
Vickers Machine Co.
Victaulic Co. of America
Victor Balata & Textile Belting Co.
Vogel, Felix A.
Vogt, Henry, Machine Co. 67

W

Wagner Electric Corp.
Wailes, Dove-Hermiston Corp.
Wall Rope Works, Inc.
Walworth Co. 1
Warren Petroleum Co.
Waukesha Motor Co.
Westco Pump Corp.
Westcott Valve Co.
Western Gas Construction Co., The
Westinghouse Electric & Mfg. Co., The
Wickwire Spencer Steel Co.
Wico Electric Co.
Williamsport Wire Rope Co.
Wilson-Snyder Mfg. Corp.
Winkler-Koch Engineering Co., The 104
W. K. M. Co., Inc.
Worthington Pump & Machy. Corp.
Wright Manufacturing Co.
Wyatt Metal & Boiler Works

Y

Young Engine Corp.
Youngstown Sheet & Tube Co., The 70

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Table of Contents

SPECIAL ARTICLES

East Texans' Policy Brings Price Cut 11
By James McIntyre
Disregard of market requirements brings inevitable consequences. Texas hits new production peak.

Frank Discussion at Natural Gasoline Meeting 13
By W. T. Ziegenhain
Stress using technical knowledge to aid sales.

Bending Force Affects Threaded Joints 14
By John T. Hayward
Theory applied to rotary tool joints and wrist pins.

Successful Self-Locking Screw Thread 14
Used on sucker rod joints and extended to other equipment.

Expect Price Adjustment in California 15
By L. P. Stockman
Fundamental conditions show decided improvement on coast.

New Trend Towards Integration 15
By A. E. Mockler
Eastern executive comments on development of the industry.

Pipe Liners Use Machinery Extensively 16-17
By L. G. E. Bignell
Greater speed and equipment to handle heavier pipe.

Transportation of Natural Gasoline 18
By F. E. Rice
Pipe line movement necessary for economical utilization.

Telling the Customers (Editorial) 20

Natural Gasoline From Refiner's View 22
By Emby Kaye
Stabilization mutual problem of both industries.

East Texas Crude Prices Cut 30 Cents 24
By Neil Williams
Humble reduces all grades from below 35 to 40 degrees.

Pipe Line Construction News 44

Obtaining Balanced Bandwheel Pumping Powers 50
By R. E. Bridges

Active Oil Men Before Journal's Cameras 59

Field Problems and Their Solution 68
Edited by Thomas F. Smiley

Oklahoma Gross Production, First Quarter, 1931 71

Map of New Field in Fort Bend County, Texas 96

Wirt Franklin Wires Texas Governor for Session 118

San Joaquin Valley Production Division Meets 119

Detailed Field Operations in April 122

FIELD OPERATIONS

Late Fields 24

Oklahoma 26
By W. A. Spinney

Kansas 27
By W. A. Spinney

North Louisiana-Arkansas 30
By J. R. Crumpton

Southwest Texas 32
By B. D. Stevenson

Gulf Coast 34
By Neil Williams

Rocky Mountain Area 36
By Tolbert R. Ingram

Canada 36
By Victor Lauriston

California 38
By L. P. Stockman

Corning Gas Field 38
By Special Correspondent

East Texas 41
By L. E. Bredberg

Map of East Texas Fields 42

West Texas, North Texas and Panhandle 46
By L. E. Bredberg

Michigan 48
By Paul A. Elliott

Central West and Kentucky 50
By George A. Whitney

Eastern Fields 53
By Staff Correspondent

REFINING AND MARKETING

Fuel Oil Prices Continue Decline 12
By C. O. Willson
Slow demand results in additional price adjustments downward. Minor price changes in other products.

Technical Questions Answered 66
By Charles K. Francis, Ph.D.

Chicago Market on Upward Trend 102
By Robert C. Conine

Eastern Market Is Soft 103
By A. E. Mockler

Brief Items for Petroleum Refiners 105

Natural Gasoline Manufacture 106

Refinery and Crude Prices 108-109

Tank Wagon Quotations 110

Of Interest to Sales Departments 111

DEPARTMENTS OF GENERAL INTEREST

The Advertisers' Index 9

Personal Paragraphs About Oil Men 54

Natural Gas Developments 56

Oil Industry Equipment and Supplies 62

Classified Want Advertisements 100-101-103

Oil Securities Market 112-113

Crude Petroleum Statistics 128

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Refinery Section Starts on Page 102

East Texans' Policy Brings Price Cut

Highest production in 1930, week ending Feb. 22, average daily output 2,699,096 bbls. Peak of U. S. production, week ending Aug. 24, 1929 average 2,975,435 bbls.

Disregard of Market Requirements Brings Inevitable Consequences. Texas Hits New Production Peak

By James McIntyre

Lowest daily average crude oil production in the United States during 1930 was for week ending Dec. 27 with average output of 2,144,074 bbls.

After giving the State of Texas three weeks to extend proration into the new East Texas Field and seeing little in the way of results, the Humble Oil & Refining Co., which on April 21 accorded the field the regular Mid-Continent price schedule, cut its prices 30 cents per barrel on all grades from below 35 degrees up to 40 degrees and above, resulting in a weighted average price of about 35 cents per barrel. The failure of East Texas operators as a whole to pay any attention to the orders of the Texas Railroad Commission together with the fact that a large percentage of the oil produced in the field is being sold at prices far below the Mid-Continent price schedule posted by the Humble and other large companies was responsible for the action of the Humble company which also issues the hint that if conditions are not improved the cut in prices may spread to other fields in the State. The action of the Humble was quickly followed by the Gulf, Texas and Sinclair companies, which posted similar price schedules.

Governor Sterling of Texas is being bombarded with pleas for a special session of the Texas legislature to be called for the purpose of acting on the Howsley bill, which was not presented in the session that adjourned sine die on May 22. Lack of time prevented its consideration, the bill not having been presented until the closing days of the session.

The State of Texas in the past week reached a new peak in crude oil production, an average of 927,862 bbls. per day. It is the largest daily production any state has ever shown. The continuance of the present development policy in East Texas can easily result in a million-barrel-per-day output for the State.

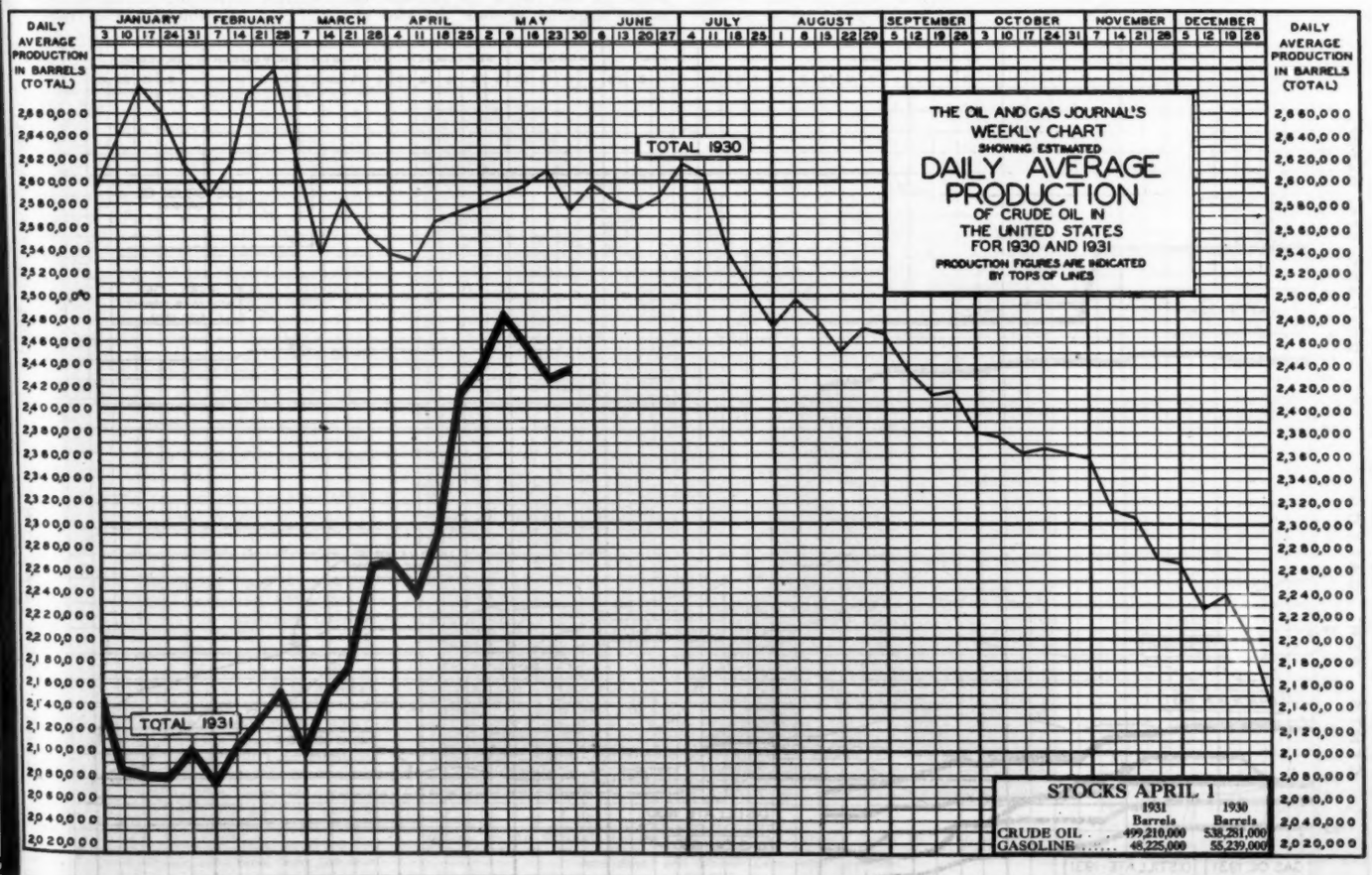
Texas is the only state in the Union that is overproducing on a large scale. All sense of values seems to have been lost in the exploitation of the East Texas Field. Producers give no consideration to the fact that 160,000 bbls. a day at 65 cents per barrel will yield as much return as 297,000 bbls. at 35 cents per barrel and that they could save 137,000 bbls. per day for a future market at a fair price. They are repeating the error of Seminole producers in 1926 and '27.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of crude oil in the United States for week ended May 23 and a comparison with the previous week follows:

	May 23	May 16
Oklahoma—		
Oklahoma City	143,360	173,570
Seminole-St. Louis	160,490	162,130
Remainder of State	238,100	237,725
Total Oklahoma	541,950	573,425
East Texas—		
Kilgore	124,250	115,400
Lathrop	61,512	48,550
Joiner	118,000	92,500
Total East Texas	303,762	256,450
West Texas	207,850	213,168
North Central Texas	80,937	80,146
Texas Panhandle	59,002	61,250
East Central Texas	56,742	55,197
North Louisiana	38,890	39,775
Arkansas	46,660	46,755
Kansas	106,270	107,480
Total Mid-Continent area	1,442,063	1,433,646
Gulf Coast	181,760	182,257
Southwest Texas	69,202	68,123
Eastern	110,500	111,500
Rocky Mountain area	98,205	99,516
California—		
Santa Fe Springs	72,250	72,500
Long Beach	86,500	87,500
Playa Del Rey	29,000	30,000
Elwood	34,250	34,250
Kettleman Hills	44,000	38,000
Remainder of State	271,500	274,000
Total California	537,500	536,250
Total United States	2,439,230	2,431,292

→ Increase 7,938 Bbls. Daily ←



Fuel Oil Prices Continue to Decline

Slow Demand Results in Additional Price Adjustments Downward. Minor Price Changes in Other Products

By C. O. Willson

Continued declines in all grades of fuels with minor price changes in other products summarize the price developments of the past week in the Oklahoma (Group 3) market.

With no improvement in demand, all grades of fuel oil moved to lower price levels and the bulk of trading in gas oils and regular grades of distillates was at the lows of the prevailing quotations. Veteran market observers are agreed that the fuel market never appeared in a more unfavorable light since refining became a major industry in the Mid-Continent.

Because of the direct relationship between fuel oil and crude oil in the manufacture of gasoline, the weakness has significance to those who are not participating in the spot market on fuels. The inevitable result of the present condition, if it continues, will be expansion in cracking facilities to take care of the distress fuel oil and gas oil with a consequent decrease in the demand for crude oil and a continuance of low prices in the refinery tank car on gasoline.

Having in mind this relationship between crude oil and fuels as raw material in the manufacture of gasoline, market students have pointed out from time to time over the past year that the slow demand for fuel oil by industries, railroads and other public utilities—brought about by general business conditions—was reacting against the gasoline market more than any changes in the gasoline demand. Fuels have not been generally strong in the Mid-Continent for over two years and, with the smaller skimming plants furnishing the bulk of the spot demand, the larger refiners have found it expedient to add to their cracking equipment so as to reduce their fuel oil output to a minimum. The relatively high antiknock rating of cracked gasolines has, of course, contributed to this development as well as the relative price situation between crude oil and cracking stock.

REFINED MARKET BAROMETER

The gasoline market continued to reflect uneasiness in all areas. The reduction of 30 cents in the posted price on East Texas crude, announced Tuesday by the Humble Oil & Refining Co., was generally accepted as evidence that new tactics will come into use to enforce proration in that area and the course of Mid-Continent refined oil prices will not take an upward turn until something definite is accomplished.

Gasoline was freely offered along the East Coast at price concessions. Fuel oil demands are well up to expectations but prices have not changed. Except for slight reductions in the gasoline price and the low gravity fuel oils, the Mid-Continent quotations remain unchanged. Gasoline prices in the California area tended to strengthen during the early part of the week, following the report that normal crude prices would be restored but no general change resulted by the close of the week.

Mid-Continent—Slight price concessions were offered on gasoline and fuel oils with no change in the balance of list of products.

East Coast—Gasoline demands weakened and orders were accepted by the smaller refiners at prices slightly under those of a week ago. Fuel oils continued to be the only product to show strength.

California—There were no important price changes in the California market.

Gulf Coast—The heavy viscous lubricating oils were in demand and prices were firm but the balance of the market remained unchanged.

Chicago—An improved demand for gasoline was expected to permit a slight advance in prices over the near future, especially natural gasoline. The lower East Texas crude prices as posted Tuesday dampened optimism, however.

Pennsylvania—The slow demand for gasoline and lubricants has characterized the market for the past week and price shading has been resorted to at times, but this seems to offer no specially stimulating effect.

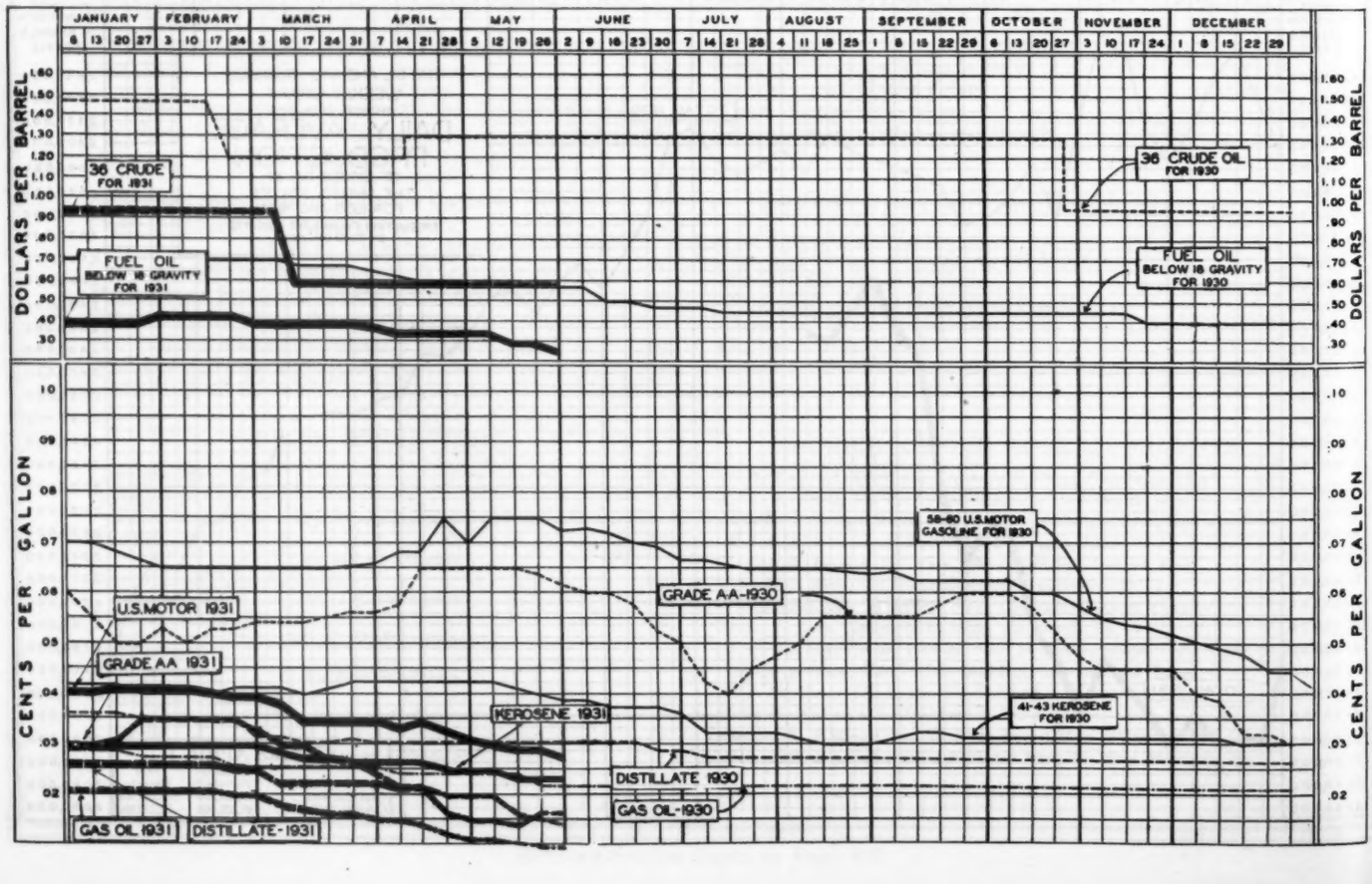
Fuel Contract Situation

In regard to fuel oil it is pointed out that present market quotations do not reflect the prices being received for the bulk of the material produced by Oklahoma refiners. A majority of the refiners have contracts with railroads serving their refineries covering all or a large part of their plant output. Many of these contracts made early in the year have provisions which assure the refiners a minimum price of 60 or 65 cents. These contracts are usually based on 60 per cent of the posted price of crude oil. Fortunately, most refiners had the minimum clauses so that the drastic reductions made in Mid-Continent crude oil prices in March did not affect the prices on fuels delivered to the railroads. At least two of the railroads, due to the disparity between the spot and contract prices, have reduced their takings on the latter and bought as much as possible on the spot market. However, most railroads appreciate the serious situation confronting the Mid-Continent refining industry and its relationship to the carriers' future business and are willing to pay contract prices which are at the lowest levels in years.

The situation has not been helped any by the starting up of new refineries in East Texas. All of these are of the skimming type with a relatively high fuel oil yield. Some of the owners have railroad contracts but there is already a substantial surplus on the spot market. Coming at a time when the older refining areas have not been able to find outlets for all of their output, the new supply in East Texas has brought additional price reductions.

The weakness centers in the high cold test grades. During the winter months this high cold test material was not such a problem because many buyers could not use that grade and were willing to pay the premiums asked for the low cold test grades. Cold test is now of little importance and the low cold tests have been forced to meet high cold test prices. The extremely high cold tests (60 to 90) are available from 5 to 15 cents a barrel under the general quotations. In the Texas Panhandle and scattered points in North Texas and Oklahoma there are accumulations of this high cold test material which has been quoted as low as 15 cents a barrel basis the Texas Panhandle. Some of this material has a gravity as high as 27 A.P.I. Normally there would be some demand for this fuel oil as cracking stock as it gives excellent yields charged direct to cracking units or re-

(Continued on Page 119)



Frank Discussion Presented in Meeting

Natural Gasoline Manufacturers Stress Importance of Using Technical Knowledge Gained to Further Sales

By W. T. Ziegenhain

With the statement by G. G. Oberfell of the Phillips Petroleum Co. to the effect that the industry had failed to sell natural gasoline on its true merits and that sales managers in general had not made full use of the technical data available, the tenth annual meeting of the Natural Gasoline Association of America was precipitatel into a frank discussion of the economic ills at hand. There were several general suggestions offered as a solution. One of these was "Go direct to the ultimate consumer with your products"; another was "Educate the refiner to appreciate the improvement in quality in his gasoline were he to blend a higher percentage of stabilized gasoline into his production." A combination of these ideas was contained in the plea, "Bring the facts before the public and make available to them balanced gasolines which contain a relatively high percentage of natural and refiners will be forced to adopt similar specifications on their production."

A. T. Sherer, sales manager for the natural gasoline division of the Sinclair Oil & Gas Co., called for a specific solution of the immediate problem of selling natural gasoline to refiners who cannot move their own production. He brought out the fact that spot buyers of refinery gasoline were not willing to listen to the story about quality but were buying on price alone. "The 68-70 grade brings no more than the gasoline which just passes U.S. Motor specifications," he said. The refiner is now equipped to make a large share of the natural gasoline needed to blend with his production to make an acceptable motor fuel. He is not interested in buying more natural unless he can do so at a profit or under conditions which will at least permit him to sell it at the delivered cost.

The double freight exacted on most of the natural blended at refineries is the greatest factor now standing between the natural gasoline manufacturer in the sale of his product and the refiner who would like to use more of it. With the price on natural gasoline so low that the freight represents from 50 to 100 per cent of the plant price, attention is being turned toward the blending of natural into the crude in the field, allowing the refiner to recover it again in his own plant. This will be worked out in some cases but the problem is too complex to permits its speedy general adoption. The fact pipe lines in the Mid-Continent Field operate as common carriers and price schedules on the crude have been based on gravity, with no premium offered for crudes above 40 gravity, there is but little encouragement offered in this idea. This subject was well covered in a paper presented by F. E. Rice of the Phillips Petroleum Co. and is published in this issue of The Oil and Gas Journal.

Dr. E. R. Lederer, vice president of the Texas Pacific Coal & Oil Co., sought to summarize the conditions facing the industry in the statement to the effect that natural gasoline manufacturers are still very much dependent upon refiners for the sale of their production. The plan of selling direct to the consumer involves building marketing facilities or encouraging the blending of natural gasoline in jobbers' storage. He branded the idea of building more filling stations as unsound and warned that improper blends made by inexperienced or unscrupulous jobbers who bought on price alone would soon bring the use of natural into disrepute and the ground the industry has gained during the past five years of research work would be lost. He said the present low prices on natural gasoline are simply typical of the prices being received for commodities in general and that the economic pressure on the industry was not unique.

NEW ASSOCIATION OFFICERS

S. S. Smith, in charge of the Shell Petroleum Corp.'s plants in the Mid-Continent was elected president of the Natural Gasoline Association of America for the coming year. Mr. Smith relieves Dr. E. R. Lederer, vice president of the Texas Pacific Coal & Oil Co., who has held this office for the past two years.

As vice presidents, men were chosen who represent manufactures in the three major producing areas. Emby Kaye, in charge of manufacturing operations for the Skelly Oil Co., was re-elected, and the two new vice presidents chosen were W. W. Robinson, Jr., of The Texas Company of California and G. M. Campbell of the United Gas Public Service Corp.

Companies elected to the new board of directors include the Indian Territory Illuminating Oil Co., Crosbie and Moran, Inc., Roeser and Pendleton, Inc., and Carbide and Carbon Chemicals Corp.

S. S. Smith of the Shell Petroleum Corp., the newly elected president of the gasoline association, amplified this thought and pleaded for the use of foresight, as far as possible, in directing changes in the methods of operating or selling in the future. He said, "We are just beginning to derive the benefits of our research program." He pointed out that the refiner will always find natural gasoline the logical means of building up his production to the necessary volatility, and this need is beginning to be better recognized. The discussion then turned to the prediction of future trends.

G. G. Brown Comments

At this point Dr. G. G. Brown of the University of Michigan, who has directed the research work of the association, outlined in a brief manner the situation as he viewed it. He said, "With the average refinery gasoline being offered at filling stations running near 60 octane number and the average grade AA natural gasoline having an octane number of about 65 it is not likely that much natural will be sold on the basis of its increasing the antiknock value of the blend." He pointed out that instead, the increased use of natural gasoline will be effected by further stabilizing the natural so the refiner will be able to use a greater volume of it and by educating the refiner to its use as a means of building up his production to the desired volatility. He predicted that in the future the premium fuel would be one in which as much attention is paid to volatility or the 50 per cent point as to antiknock value.

Pricing Basis

After mentioning the term "premium gasoline," the question was raised whether butane-free natural should be considered a premium grade or taken as the standard and those from which the butane had not been completely extracted as inferior grades.

E. L. Peck, manager of the gasoline division of the Empire Oil & Refining Co., emphasized the importance of settling this question. He outlined the relationship existing between the producer and gasoline manufacturer with respect to the price to be paid the producer under the present terms of the standard gas contract. Under it the producer receives payment in proportion to the price received on the gasoline. If a butane-free gasoline is considered the basis, obviously the price will be relatively high and the volume of gasoline produced less by the amount of butane extracted. Considerable discussion followed but since solution of it has been left up to a committee appointed by the association, statements were made conditional and no conclusions were attempted.

Whether butane-free gasolines are to be considered as a premium grade or as the ordinary grade, with others falling into a subclassification, was also considered from the standpoint of serving as a basis for the publication of prices. Sales of natural containing a relatively high percentage of butane are necessarily made at prices below those reasonable to expect for the butane-free grades. Under the present system of publishing prices the complaint is made that a sale of an inferior grade of natural at a low price establishes a new low for the published price range and causes the entire pricing structure to be brought to lower level in current trading. An effort is being made by the sales managers committee to remedy this condition.

Commenting on the method of pricing natural gasoline, G. G. Oberfell again directed his comments to the sales representatives when he said there is no reason for the price of well stabilized grades of natural gasoline to fall below the U.S. Motor refinery price. He contended that the U.S. Motor price should be a rock-bottom quotation at all times and that its superior quality justifies this stand.

D. E. Buchanan of Hanlon-Buchanan, Inc., agreed this was a commendable method to adopt and that sales managers should "think that way," but to put it in practice at this time is impossible. He said that with loaded cars on the track, the average sales manager cannot think in terms of the ideal.

New Grading System

A paper delivered by R. C. Alden of the Phillips Petroleum Co. in which he discussed the new method of grading natural gasoline caused interest to shift back to a review of conditions surrounding the refiner. It was said that many of the larger refining companies now operate recovery and stabilizing units which allow them to entirely suspend their purchases of natural during those periods when too heavy a difference exists in the price between natural and U. S. Motor. In a similiar manner, refiners may suspend purchases when it is necessary to conserve cash, when they cannot move their own production and when they are willing to ignore best volatility. In other words, it was conceded that if the refiner so wishes, he may "get by" independently.

Proof however that the refiner prefers to augment his production with liberal quantities of natural gasoline was repeatedly given in the review of statistics. They show that refiners used more natural last year than any previous year and during the first three months of this year purchased more than during the first three months of last year.

Thus, manufacturers were assured that

(Continued on Page 116)

Officers of the Natural Gasoline Association of America. From left to right are Ray Miller, secretary and treasurer; S. S. Smith, the new president; G. M. Campbell, vice president; and Emby Kaye, vice president.

Bending Force Affects Threaded Joints

Behavior of Rotating Parts Subjected to Bending Forces. Theory Applied to Rotary Tool Joints and Wrist Pins

By John T. Hayward
Consulting Petroleum Engineer, Tulsa, Okla.

FIRST PUBLISHED EXPLANATION

John T. Hayward has prepared this paper to present his theories and explanations of the tendency of rotary tool joints to unscrew when the direction of rotation should apparently cause them to make-up. This condition also occurs in the action of left-hand threaded wrist-pin nuts on pumping cranks loosening when the crank motion is forward. This is the first published explanation of this phenomena and is presented at this time because it is understood that the matter will be discussed in committee sessions at the A.P.I. Division of Production meetings in Dallas, June 3 and 4.

Referring to Figure 1, a short length of pipe X is gripped in the jaws of a chuck with its axis horizontal. A second length of pipe Y, a little larger in diameter, is slipped loosely over X. The portion of Y projecting beyond X is greater than the part overlapping X so that, owing to the slack fit, Y inclines slightly downward, the axis of the two pipes making an obtuse angle of a little less than 180°.

If now the outsides of these two pipes be marked in some manner and the chuck slowly rotated, it will be found that X rotates a little faster than Y, the marks on X creeping in the direction of rotation ahead of those on Y.

It is not difficult to follow the working of this mechanism. The two pipes are in rolling contact at the points A and B, the pitch circles being the internal diameter of Y and the external diameter of X, and as these differ the angular velocities will differ, and there will be a relative angular movement between the two members. Further, when the overhang of Y is great in comparison to the distance A-B, the leverage will give rise to high contact pressures at A and B, and prevent slip even when transmitting a considerable torque.

Referring now to Figure 2, a third piece of pipe Z of smaller diameter than Y is slipped into the end of Y. When X is rotated it will be found that as before Y will lag a little behind X, but that Z will rotate faster and creep ahead of Y. This arrangement corresponds to the regular collared pipe joint.

Similar action will take place when the two parts are tapered provided the tapers correspond. If the tapers do not correspond, the ratios between the mating pitch circles at A and B (see Figure 3) will not be the same, and there will be slip at one point of contact and/or the other.

There will be the same tendency to differential angular velocity and relative rotation if the lengths of pipe in the arrangements described above are threaded and screwed together, provided the deflecting force is sufficient to produce play in the joints. X and Z become two lengths of pipe with male threads screwed into a collar Y. If the threads are right-hand, and the direction of rotation clockwise to an observer looking along the axis of the pipe, the joint in the end of the collar towards the observer will tend to make up, while that in the end of the collar remote from the observer will tend to unscrew.

Fountain Pen Object Lesson

An ordinary fountain pen with a screwed-on cap affords a good illustration. The cap is slacked off a little, and two marks, such as the clip and filling lever, lined up. If now, the pen is held by the cap in a horizontal position and slowly rotated in the screwing-up direction the body will rotate faster than the cap and the joint will therefore slowly unscrew. When the position is reversed, and the pen held by the body or pin and rotated in the same sense as before, the joint will make up.

Similar tests may be carried out in the lathe and the phenomenon is in fact well known to many machinists although the reason for it is not understood. If a 2-foot joint of say 3-inch pipe is chucked, a collar screwed on the projecting end, an 8-foot length of pipe screwed into the collar, and the lathe run slowly, one joint will make up tight, and the other will unscrew until the pipe falls out. This may take a considerable time depending upon how tightly the joints were made up, and the fit of the threads.

Turning to the practical side, conditions similar to those outlined above are found at rotary drilling wells when the holes are not straight. At any crooked part of the hole, there will be a tendency for joints, with pin pointing down, to make up, and for those with pin pointing up, to unscrew. With the standard type of tool joint, the joint between the pipe and the top of the tool joint (A in Figure 4), and the tool joint coarse thread B, will both tend to make up, while the joint between the top of the pipe and the bottom of the tool joint, C in the sketch, will tend to unscrew. In a made-up joint, the difference in the diameters of the pitch circles is, of course, small, and the relative rotation is consequently also small compared with the total number of turns made by either piece. For example, with a clearance of 0.001 inch in a 6⅝-inch drill pipe joint running at 80 r.p.m., the relative rotation, without slip, would be about 4° per minute, or two-thirds of a revolution per hour.

Tendency to Unscrew

The tendency of joints with pin pointing up to unscrew is, of course, opposed by the torque transmitted by the column of drill pipe and is also affected by the curvature of that part of the hole in which the joint happens to be. As both these conditions vary the joint will be liable to work backward and forward. Any such see-sawing must lead to wear and eventually to a leaky joint, some of the grief experienced with tool joints being in all probability due to this cause. The trouble is likely to be more pronounced in rock bit territory, owing to the comparatively low driving couple required by rock bits. At the same time, it must be remembered that owing to the shortness of the threaded parts in comparison with the length and stiffness of the stands, the leverage on the joint may be large, and the tendency of the one part to rotate relatively to the other consequently also large, and able to overcome

(Continued on Page 48)

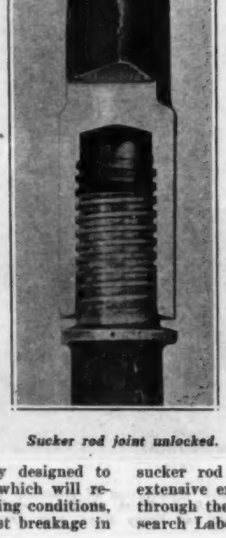
Self Locking Screw Thread a Success

Dardelet Thread Used With Success on Sucker Rod Joints and Application Being Expanded to Other Equipment in Oil Industry

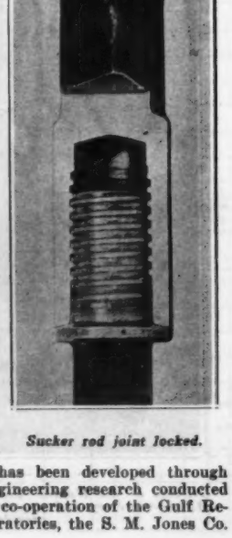
Pumping cost statistics gathered by the production departments of various oil companies have served to emphasize the economic importance of organized effort to decrease sucker rod failures.

The solution of problems involving the fatigue strength of materials naturally depends on continued metallurgical research and experiment. A large percentage of sucker rod trouble is, however, directly traceable to unscrewing of the joints. The failures in this classification caused by improperly made up joints, whether due to dirt or battered shoulders, can be eliminated by education of the rod crews. There has been, however, no satisfactory means of preventing properly made-up joints from working loose under the vibration of pumping. Various locking devices have been suggested from time to time but in all instances there were basic objections which made them impractical.

Every field engineer is familiar with the costly troubles which result when a joint becomes unscrewed through vibration—such as pin breaks, body breaks which occur as a result of dropping, fishing, and the loss of production during the down time. It is believed that such failures with their attendant losses will be eliminated by sucker rods with the Dardelet self-locking screw thread, which are being manufactured and sold by the S. M. Jones Co.



Sucker rod joint unlocked.



Sucker rod joint locked.

These rods are not only designed to provide self-locking joints which will remain tight under all operating conditions, but they are insured against breakage in the threaded portion while in pumping service.

The insurance plan takes into consideration the fact that a joint break means a loss much greater than the mere cost of the broken rods. The insurance certificates which are delivered with each shipment of Dardelet rods guarantee the payment of $30 for each joint broken while in service. This sum represents the cost of the broken rods plus the average expense of recovering the broken string from the well.

The Dardelet thread applied to bolts, nuts and screws is already known to oil men through exhibits and demonstrations at the Petroleum Expositions at Tulsa and Los Angeles. The Dardelet threaded sucker rod has been developed through extensive engineering research conducted through the co-operation of the Gulf Research Laboratories, the S. M. Jones Co. and the Dardelet Threadlock Corp. of New York, owners of the American patents. The laboratory work has been supplemented by successful field service tests covering a period of seven months.

The Dardelet thread locks by reason of the wedging action of tapered thread faces which come in contact when the box is tightened against the pin shoulder. These tapered thread faces are found at the bottom of the pin thread groove and at the crest of the box thread. (See cross-section views.)

When the box and pin are being screwed together, the threads are in the unlocked position and turn freely until the box is seated against the pin shoulder. When the box is seated against the pin shoulder a partial turn of the wrench causes the box and pin to rotate without advancing. The box thread moves directly across the pin thread groove until the flanks of the threads meet and the tapered thread faces are powerfully wedged together. The joint will now remain securely locked under all service conditions for the same reason that a taper pin remains tight in a tapered hole. Box and pin have become in effect one mass. There can be no rocking movement to set up fatigue stresses.

When it is necessary to unscrew the joint, the threads are readily unlocked by turning the box section backward with the wrench. This releases the pressure generated between the tapered locking surfaces and the joint easily spins apart. The threads are uninjured by the locking action, consequently Dardelet threaded rods may be used over and over again and will always relock.

Dardelet threaded pins are materially stronger and have greater resistance to fatigue stresses than standard threaded pins. There are three reasons for this increased strength and fatigue resistance—the Dardelet thread is less deeply cut than the standard thread leaving a greater root area—it is free from so-called "notch effect," and to this strength of material and form is added the strong frictional lock—a combination which makes for maximum resistance to destructive service forces.

Sees New Trend Towards Integration

Oil Business Joining Move in Major Industries to Complete Operation From Raw Material to Finished Products

By A. E. Mockler
New York Bureau, The Oil and Gas Journal

NEW YORK, May 25.—Depressed markets for crude petroleum and products, with an assured oversupply, will give considerable impetus to the move for unitization, integration and consolidation in the petroleum industry, and the oil business, formerly regarded by many as an adjunct to the production of crude, will adjust itself to a position where crude output will be merely an adjunct of refining, transporting and marketing, in the opinion of a prominent eastern oil executive.

Discussing the probable outcome of the present era of overproduction and low prices with which the industry is beset, this executive said: "The trend in crude oil now is to definitely regard it solely as raw material for a manufacturing business. Those companies which emerge from the present period of depression in strongest position, in my opinion, will be the ones that further integrate their operations and further rationalize their crude producing operations, with this thought in mind.

"Major companies in the oil industry have always suffered a great deal due to the fluctuations and vagaries of crude oil in quantity, quality, and price. Lack of reserves has always hitherto kept the manufacturing companies dancing on the hot stove, and the industry is gradually awakening to a realization that this condition must be remedied. The modern refinery is an intricate affair. It must be built for a definite raw material, and despite the many improvements and refinements in processing technique during the past few years, refinery design and construction has not yet reached the point where a large plant has the flexibility for a changeover from one crude oil to another overnight. Great savings could be accomplished in manufacturing were a definite crude available in approximately known quantities over a period of many years.

When Production Dominated

"In past years one producing field has dominated the market for a year or so and has then become exhausted to such an extent that its production is merely thrown into the pot with a lot of other cats and dogs of varying characteristics so that the best can not be got out of any of them. This does not make for either efficient or economical output of products, and is a situation which must be remedied.

"The need for integration and the coordination of effort all along the line from the raw material to the finished product is not evident alone in the petroleum industry, but is likewise apparent in many other basic industries. Oil men, with their many vexing problems during the past few years, have perhaps become too self-centered, and have overlooked the significant operating changes in other basic industries which are meeting and surmounting difficulties in many ways akin to those of our own business.

"Successful steel companies today are those which have developed their own production of ore as raw material, coal as fuel for their plants, blast furnaces for the production of pig, steel mills for the production of bars and billets, and rolling and finishing mills for the making of shapes, strips and other finished and semifinished products. These companies have realized as well the necessity for a more definite control over their transportation expenditures, and many of them operate their own fleets of ore and coal carriers, and are in position to ship their finished products to consuming markets. In time this period of intensive integration in the steel industry will quite likely take the form of manufacture of finished products, such as automobiles, refrigerators, furniture and other products made largely from steel.

"The petroleum industry, in a few instances, has paralleled the integration of the steel trade, with a number of major oil companies engaged in producing, refining, marketing and the transportation of both crude and finished products to distributing centers. The greater part of the industry, however, has yet to become welded into compact groups of this sort, and this convinces me that consolidations and integration of so-called 'independent' units will be necessary before the industry finally works out of its depression. How can any single unit in the long chain of operations in the petroleum industry expect to continue and prosper, faced as it is with the competition of thoroughly integrated units with flexibility of operations impossible to the single factor in any single division of the business?

Changes in Other Industries

"Similar significant changes are also being witnessed in many other branches of American commercial and industrial activity. In the agricultural industry, for example, there are many definite indications of integration. California fruit growers have led the way with their huge associations which not only aid the fruit farmers in growing fruit to grade, but likewise handle packing, transportation and marketing as well, and conduct research operations designed to improve both growing methods and products.

"In the wheat industry, the so-called 'independent' is rapidly losing ground to the combines and 'pools' which have come into the wheat industry on a gigantic scale. The fact that these organizations are in many instances co-operative does not lessen in any appreciable measure the benefits of integration thus obtained.

"A few years ago, there were numerous operators of clay mines, producing clay for operators of brick plants, who in turn sold their product to jobbers, who in turn marketed the finished bricks to builders. The day of the single factor in each of these divisions of the building industry is apparently over. Due to the need for added economies in producing and distribution, the owner of clay mining properties is buying up brick plants and marketing outlets; or the brickyard operator is buying up mines and establishing sales organizations reaching right to the builder. It is but a matter of time when the production of clay, the manu-

(Continued on Page 116)

Expect Price Adjustment in California

Fundamental Conditions Showing a Decided Improvement on the Pacific Coast. Slight Increase Is Possible

By L. P. Stockman
Staff Correspondent, California Fields

LOS ANGELES, Calif., May 25.—Developments during the past few days indicate a strong probability that crude and refined oil prices on the Pacific Coast will be adjusted within the next few weeks. This does not mean of course that the schedules and prices prevailing earlier this year will be restored as this would be economic suicide in view of subsequent developments.

But at the same time it is logical to assume that a slight upward revision can be expected in the near future due to recent legislative enactment of compulsory curtailment measures, a tightening of the state gasoline tax bill and the progress made by the Oil Producers Sales Agency. Those in close touch with the situation are of the opinion that gasoline prices will be stabilized somewhere around 15 cents per gallon and an advance of about 25 cents per barrel made in the posted price of refining crude.

It might not be amiss to mention in passing that this project revision in crude and refined oil prices will create an artificial equilibrium and thus require unusual care as the price structure will of necessity be extremely sensitive. Conditions at the present time are a little too unsettled to justify an immediate increase in prices but something may develop along this line early in June. One thing appears certain, however, and this is the fact that prices on the Pacific Coast will be kept within economic limitations. Marketers freely admit that gasoline prices cannot be increased much above 15 cents a gallon this year without inviting importations from Texas. Crude oil prices must likewise be kept within reason and co-ordinated with refined oil quotations. This is in line with the policy adopted by the Union Oil Co. last March, at which time crude oil prices were cut in sympathy with the drastic reductions effected in gasoline prices by the initiation of a price war late in February.

Decided Improvement

Irrespective of just how soon prices on the Pacific Coast are adjusted, the fact remains that fundamental conditions have shown a decided improvement within the past few weeks. This tends to indicate that conditions within the industry will be in a much better technical position later this year. California's new compulsory curtailment bill is expected to become a factor of importance around September 1, although maximum enforcement will not become a reality until some time later. This measure becomes a law on August 1 but it will probably require an additional 30 days to perfect the mechanics of operation. The commissioners, charged with enforcement of the new curtailment measure, are faced with a big task but the urgency of the situation will prove sufficient stimulus to encourage early enforcement.

Directors of the Oil Producers Sales Agency announced a few days ago that independent operators with an aggregate daily crude oil production of 150,000 bbls. have already become members of the agency and that an additional 50,000 bbls. is expected to be signed up in the near future. This organization is expected to become an important factor on the Pacific Coast as the agency will be in a position to dominate independent production activities and dispose of its oil as a unit. Most independent producers recognize that oil sold to unethical jobbers and cut rate refiners ultimately wrecks the entire price structure and as a result they are making a determined effort to eliminate this evil. This destructive factor will be minimized by the sales agency as it will have authority to regulate the sales and outlets of its members and thus be in a position to refuse oil to price cutters.

Sales Agency

Directors of the Oil Producers Sales Agency have been instructed to assume a definite constructive attitude on all matters affecting its members. With respect to curtailment, the agency has gone on record that it will not be bound by any program not approved by the directors and the directors are further instructed not to approve any program which is not carried out diligently. The resolution setting forth this position is to the effect that, "the approval heretofore given to the said program is conclusively predicated upon the rigid maintenance by each factor or body in the said program, of its respective place in the said program; and this agency will not countenance the surrender of any proper duties or responsibilities by any such factor, committee or body to any officer or group whatsoever not properly charged with such duty or responsibility. That any approval of this agency to any proceedings under the program is predicated upon the presumption that substantial compliance with ordinary parliamentary law be used in arriving at collective decisions."

Oil Buyers Agency

Organization of an Oil Buyers Agency to embrace a majority of crude oil purchasing companies has been under discussion for the past several days. The proposal, which is still in the formulative stage, is not being made as opposition in any way to the recently organized Oil Producers Sales Agency but rather as a means of co-operation in an effort to harmonize supply and demand toward which both producers and refiners are striving. The seven major companies, Associated, General Petroleum, Richfield, Shell, Standard, Texas and Union are buying approximately 185,000 bbls. of crude oil per day from independent producers. Approximately 80,000 bbls. per day is being bought or produced by independent refiners. In view of the fact that the major buyers of crude oil purchase approximately half of the state's total production, it is felt that they should have equal voice with the producers in regulating crude oil supply and demand. Just as the Oil Producers Sales Agency, under existing antitrust laws, must not include all crude oil producers in their organization, likewise the proposed buying agency could not include all buyers in its association if it is to avoid

(Continued on Page 115)

Pipe Liners Use Machinery Extensively

Modern Construction Methods Demand Greater Speed and Equipment Suitable to Handle Heavier Pipe Sections Has Been Developed

By L. G. E. Bignell
Petroleum Engineering Editor

With the use of 24 and 26-inch diameter pipe for gas lines and the laying of somewhat smaller high-pressure crude oil and gasoline pipe lines there has been a marked change in the methods employed in the various pipe line construction operations. The changes have been gradual from hand labor to machine work but with the rush of new work during the past 18 months much heavier equipment has been required and used more extensively.

The use of this heavy machinery is necessary because it would be almost impossible to get enough men around long joints of 24-inch 90-pound pipe weighing from 2,700 to 3,600 pounds each to handle it economically. It has, therefore, been necessary to develop gasoline engine powered cranes, tractors and ditchers to do this work and their use has speeded up the rate of pipe laying, but when the investment is considered the actual cost of doing the work is not materially reduced below that of hand labor.

Handling pipe from truck to ground along right of way using power operated crane.

Eight-inch pipe line of Great Lakes Pipe Line Co. ready to lower in ditch.

Many of the contracts for long lines, like the 950-mile one from the Panhandle of Texas to Chicago, Ill., are based upon the time element and by the use of machinery in all operations it has been possible to lay as much as 18,600 feet of 24-inch pipe in one 9-hour shift. The pipe alone weighed about 8,370 tons and the crew was made up of about 175 men, or the material handled per man was about 48 tons.

In the old days of pipe lining mules and horses played an important part in hauling of supplies and material, backfilling and grading, and other tasks, but animal labor has also been practically discarded in favor of the truck and tractor.

Because of the use of this type of rolling stock it is now necessary on large projects to prepare a fairly smooth and wide highway along the pipe line right of way so that these machines can get over the ground and the ditchers can have ample room for excavating and piling the earth and rock from the ditch.

These roadways, about 40 feet wide on large lines, also serve another purpose in that the grade is always made with the idea in mind of reducing the high spots as much as economically possible so that the number and angle of the bends in the pipe will be held to a minimum. The pipe must follow the contour of the ditch and the ditch bottom is to some extent regulated by the contour of the ground over which the ditcher travels.

In preparing the right of ways for use as roads shovels powered with internal combustion engines are used quite extensively. Some of the cuts are quite deep and as the roadway is up to 40 feet wide a considerable amount of earth must be moved. It has also been found that by using engine powered shovels for this work it is sometimes cheaper to remove additional earth and lower the grade of the road over which the trucks and tractors must later travel with all material than it is to leave this extra earth and therefore require more time for movement of material because of poorer road bed.

Some backfilling is also done with power shovels, especially that portion included in the actual replacement of dirt over the right of way and restoring the ground to approximately its original contour.

Smaller Line Operations

In building the 8, 10 and 12-inch pipe lines a great deal of machinery is also used but it need not be of such heavy capacity as that used on the larger lines, although a contractor will adapt his equipment to both sizes of lines as a matter of economy and holding the cost of his capital investment to a minimum. If the heavier equipment is used, longer runs of small pipe can be handled and other operations speeded up somewhat, but as a general thing it is the aim of the contractor to use only such equipment on the smaller size lines as suits the conditions met with there.

After the pipe line company's right of way and land men have secured from the owners of the land the rights to run the pipe line through it and the construction contract is let, the first operation is to send out clean-up gangs.

These gangs go along the strip marked by the surveyors as the right of way for the line and clean away all trees, brush, planted crops and other obstructions found on the surface. They also cut openings through fences and prepare gates for them where necessary so that equipment and men can pass through but the cattle will not stray from their pastures.

If streams or dry ravines are to be crossed it will be necessary in many cases to build temporary bridges so that pipe can be strung along the right of way with trucks or tractors and other material delivered to location with the least amount of effort and expense.

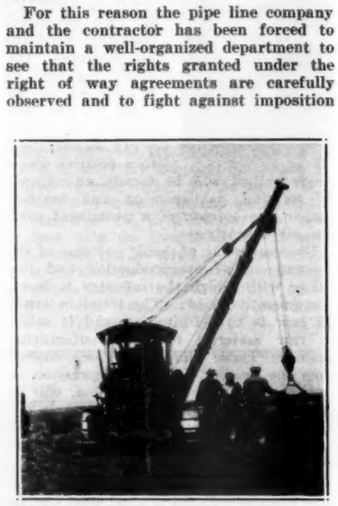
To watch some of the tractors move about a pipe line right of way, going over rocks, piles of earth, railroad embankments and across small streams it would seem that there would be little need for preparing any kind of a roadway for them, but they are not the only kind of vehicle that must move along the right of way as passenger cars carrying crews and supervisors must have access to all the operations as well as trucks carrying supplies. All these vehicles must keep within the marked boundaries of the pipe line right of way as established by the surveyors, or the company will be liable for damages done to crops and farm land by their movement outside of the limits of the company's acquired property lines.

While this work of clearing is going on, a reasonable amount of care is exercised in leveling the ground to make it as much like a roadway as possible and when this work has been done it has been found in many instances that this road is much to be preferred to the normal country lane that runs adjacent to the pipe line right of way.

It is usual to pile and burn all timber and brush, as well as weeds and other vegetation cut from the right of way, and in so doing every precaution must be exercised to see that the fire does not spread, for damage from such fires might cause the contractor to be required to pay additional money to satisfy claims.

As a matter of fact it seems to be a popular idea of some farmers and landowners along right of ways that the contractor and pipe line company are legitimate prey upon whom attempts may be made to collect every conceivable kind of damage and with the aid of petty lawyers, who take the suits or claims on a contingency basis, they form a menace to the builders of these great arteries carrying gas or oil from distant fields to cities and at times succeed in adding materially to the cost of such investments.

For this reason the pipe line company and the contractor has been forced to maintain a well-organized department to see that the rights granted under the right of way agreements are carefully observed and to fight against imposition upon their companies by those who think it is perfectly right to stick a corporation for damages.



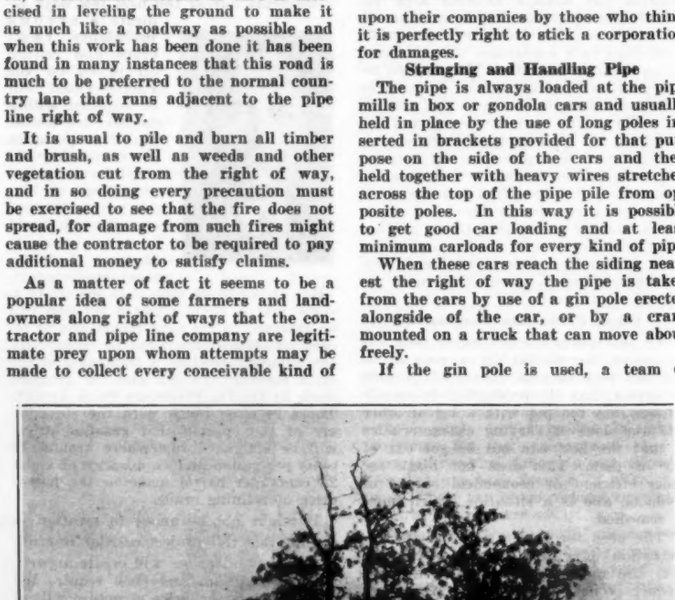
Handling large diameter on right of way with powered crane mounted on tractor.

Stringing and Handling Pipe

The pipe is always loaded at the pipe mills in box or gondola cars and usually held in place by the use of long poles inserted in brackets provided for that purpose on the side of the cars and then held together with heavy wires stretched across the top of the pipe pile from opposite poles. In this way it is possible to get good car loading and at least minimum carloads for every kind of pipe.

When these cars reach the siding nearest the right of way the pipe is taken from the cars by use of a gin pole erected alongside of the car, or by a crane mounted on a truck that can move about freely.

If the gin pole is used, a team of



Blasting rock along right of way of Great Lake Pipe Line Co. line preparatory to ditching.

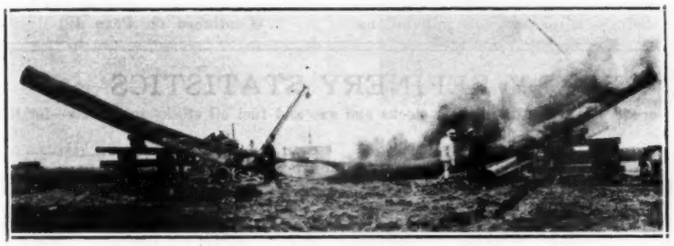
horses attached to cable running through snatch blocks and tackle furnish the power. Where the more modern truck crane is used a gasoline motor furnishes the power for lifting the pipe out of the car and lowering it to the truck bed.

The cars are spotted on sidings located so as to give a minimum of elapsed time for trips from car to location and back. Roads will to a large extent determine the distances traveled from car to pipe line right of way for in many instances it has been found much more economical to drive the truck a longer distance over better roads than to spot the cars closer to location and move the material over poor roads.

The wagon or truck handling the pipe between car and pipe line ditch will actually drop it as close as possible to the place where it will be used so that additional handling is reduced to a minimum. Some small pipe is unloaded by simply rolling it off the truck bed to the group and is not heavy enough to damage itself in falling that distance.

Where heavier pipe is to be handled it is sometimes necessary to place skids from truck bed to ground and lower the pipe by snatch block and line. This is a slow process and costly, and it is now the practice of at least one company to make use of old automobile tire casings to serve as cushions upon which the pipe will fall with practically no chance of injury.

Three or four of the larger size old truck casings are selected and fastened



Method bending pipe by mounting it on piling and binding old casings to sides and bottom and saturating with oil and firing.

together in a row by a heavy log chain long enough to reach the front end of the truck where it is attached to the front bumper. The three or four casings are so spaced on the long chain trailing backward from the front bumper as to form a series of cushions lying flat on the ground all in a line and just out from under the edge of the truck body.

When the heavy pipe is rolled off of the truck body it will fall on these casing cushions and bounce and it is then rolled out to its position on the right of way where the lining-up gang will next handle them.

The next operation is to roll several joints of this pipe into a straight line and then so block it on skids as to hold it in position until the welders can get to it and join the individual pieces of pipe by welding. There may be two, three or even six or eight individual pieces of pipe welded together to make a "run," depending on the size of the pipe, the local conditions and the number and kinds of bends necessary.

Welding Operations

When the pipe has been prepared the welders move along the right of way in gangs of three or four each and have with them either an electric or acetylene generator set mounted on a truck.

If electric arc welding is being done wires from the internal combustion engine driven generator on the truck are run up and down the pipe line and about two crews work on each side of the generator outfit.

If the acetylene gas generator is used long rubber hose lines extend out from the gas tanks and at each welder's position these lines terminate. One set will deliver the acetylene and another oxygen gas so that the proper welding flame can be maintained at the tip of the welding torch.

These several gangs of welders work at about the same speed so that the truck can be moved from location to location at regular intervals and the "tacking" or welding operations carried forward rapidly.

Bending Pipe on Location

Rights of way are secured in as straight a line as possible from point to point and all intervening obstacles moved whenever possible and practicable. In this way the run of the line is usually quite straight.

The contour of the ground will vary, depending upon the character of the

Handling trestles used in lowering pipe into ditch with crane mounted on Ford truck.

country to be traversed by the line, so the bends necessary to conform the pipe to the bottom of the ditch may occur frequently. In one large line in the breaks of the Canadian River in the Panhandle of Texas it was necessary to make 20 bends in 3,000 feet of line, while in other sections of this same line many miles were laid without a bend of any kind being necessary.

To bend this pipe in the field is a problem whether it is large or small size but the contractor has found ways of doing this that are very simple and quick and assure the proper curve being given to the pipe.

Some pipe is placed in brush fires and a portion of the section to be bent heated and then bent by anchoring one end and pulling the other around sufficiently to get the desired results.

This method can be applied to small pipe without much difficulty for it can be handled by manual labor quite satisfactorily, but with 24-inch pipe weighing 90 pounds per foot and welded into three and four-joint lengths the handling by hand labor would be impossible.

One method that is being followed by contractors is to build two trestles out of heavy timbers spaced at the proper distance from each other to permit the pipe being supported at points that will be tangent to the curve of the pipe when bent to the proper angle. The height of the trestles equals the altitude of the arc to be formed in the pipe.

When these trestles are ready the power crane will place the section of pipe to be bent on the two trestles. The crews will then wire to the bottom and sides of the pipe old automobile casings. No casings are placed on the top side of this pipe section.

The casings are then soaked in kerosene or gasoline and fired and the heat of the burning casings will gradually heat the pipe section to a temperature where it will bend of its own weight. This bending will continue in a very even curve until the pipe rests on the ground at a point midway between trestles and when this has been done the curve in the pipe section is right for the particular position it is to occupy in the line.

Pipe so treated may be used for either horizontal or vertical bends and may vary in angularity from a very small degree of arc to a right angle bend or 90°, although such sharp bends are not usually made in this way as the tube turns or regular elbows are used instead.

The bending operation is usually performed when the pipe is ready for the ditch, and is left in a position on the right of way where it can be next placed over the ditch.

Ditching by Machinery

Practically all ditching is now done by ditching machines that will excavate a ditch of the required width and depth and pile the dirt removed at one side. These machines are powered with gasoline engines and are sometimes worked in tandem, that is, one will precede the other and each perform a portion of the work.

This is particularly true where the ditch must be dug through country where rock is found near the surface. In the western states there are great areas where there is found at or near the surface a form of rock known as caliche. This is a semihard rock deposited by water in horizontal beds and too hard to dig with the ditcher without blasting.

It is, therefore, common practice to have the first ditcher remove the earth or top soil down to the upper surface of the layer of caliche. Holes will then be drilled in this rock and it will be shot to pieces. The second ditcher will follow the shooting gang and clean and finish the ditch to its required depth.

Ditches for large diameter pipe will average about 5½ feet deep but at points will be as deep as 15 feet or perhaps more, depending upon the surface in the right of way and the choice between deeper ditching or bending the pipe more to make the grade.

When some of these deep ditches are backfilled and the earth replaced that was removed in making the roadway the pipe may be 30 feet below the new surface of the ground.

Modern ditchers will make a speed of as much as 10,000 feet per 9-hour shift and they are being used in all kinds of country from the arid regions of the West to the swamps and marsh lands of Arkansas and Louisiana and in the hands of a good operator will make ditch at a high rate of speed under all conditions.

There are places along the right of way where it is impossible for the ditcher to climb and work and the ditch must be dug there by hand. Such places are not frequently encountered and mostly found near streams where crossings must be made between rather precipitous banks.

Placing Pipe in Position

After the ditch has been completed a gang follows that places the pipe over the ditch on supports and aligns it so that the operation of welding together the sections of pipe may be completed.

On small pipe various types of clamps and "bells" are used to align the pipe and when it is all in position a welder will complete the operation by starting his weld from the bottom of the pipe on first one side and then the other and welding upward to the top. This requires special skill for the pipe at this stage of the laying cannot be rolled or again moved and must be joined together as it lays.

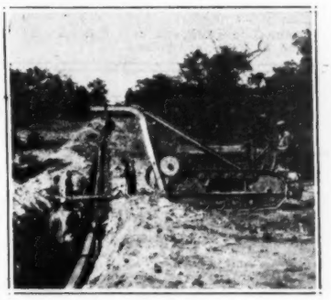
Where large pipes are to be handled, it is customary to use a ring that forms an inside sleeve and keeps the pipe in line and also serves as the inside limit of the weld.

On other lines it is practice to join sections of pipe together with patented couplings so that the welds are only in the three or four-joint sections.

In making the pipe up and bending it to conform to the ditch there is always enough slack left in the line to permit it to be lowered into place without causing undue tension between joints or sections. This also allows for contraction and expansion caused by the heat of the sun beating down on the bare pipe as it lays on the ground while the welding and other operations are going forward.

Following the welders who join the pipe together into a solid line comes the paint gang who brush and paint the pipe with such material as may be selected for a protective coating.

It is customary to paint the pipe and all joints with at least one coat of paint and modern practice demands that those



Lowering pipe into ditch with crane mounted on tractor.

portions of the line where soil conditions indicate the probability of rapid corrosive action taking place are covered with some type of protective coating.

This may be an application of hot enamel in accordance with certain specifications, a wrapping of the pipe with various types of paper and strip material, covering the pipe with cement, or the use of other methods of combating the actions of corrosive elements found in the soil.

The pipe having been prepared for

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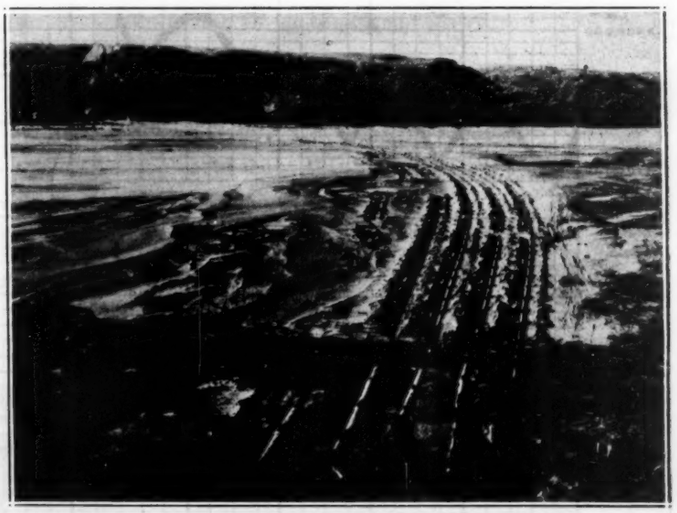


North Canadian River crossing of the Continental Construction Co. gas line from Panhandle, Texas, to Chicago, Ill. View from north bank of stream.

Transportation of Natural Gasoline

Pipe Line Movement Either With or Without Crude Oil Necessary for Economical Utilization. Producer Can Help

By F. E. Rice
Vice President, Phillips Petroleum Co.*

This present convention of natural gasoline manufacturers is in many ways a most opportune meeting. We are called together at what is really a crisis. Certainly most of the gentlemen here assembled have been sitting around trying to figure out whether they have a business, whether the money invested in gasoline plants has a value, or whether conditions have so changed that these investments are worthless. The very fact that these questions have been asked each and every one of us is proof that the question is complex and that probably time alone can solve our difficulties. However, there are some fundamental things to be considered that should offer encouragement to all natural gasoline manufacturers.

Crude oil and gasoline are the sole basic products whose markets are increasing rather than decreasing even in the face of hard times. It is reasonably certain that this increase is going to continue in the future as rapidly as it has in the past. Natural gasoline is a motor fuel. As such, it has a value comparable to refined gasoline produced from crude oil. The increasing use of motor fuel and the assurance that our natural gasoline can be used as such is the most encouraging thing in the present situation.

Production of natural gasoline reached a peak in the fall of 1929, when Seminole was at its peak. Since then, production had gradually decreased until, during the month of March, we produced 5,480,000 gallons per day, or 22½ per cent, less than our peak in 1929. I do not think there is any question but that this production will gradually decline until at least October of this year. Kettleman Hills in California, I understand, which showed an increase in March, will show a decline for April and May. The Appalachian district will show a seasonal decline of approximately 150,000 gallons per day with the shutting down of gas line plants.

There are no places that the writer knows of in the Mid-Continent Field to build gasoline plants, nor is there any increased production in sight, except at Oklahoma City where production has increased to probably what will be a peak in June. This will not be large, however, and it will not take care of the seasonal decline due to evaporation and loading losses caused by hot weather. East Texas is certainly a poor place to build a gasoline plant at the present time. All of us who have built plants on prorated oil production know how uncertain this makes the natural gasoline production. Again, although East Texas is very rich, the volumes are comparatively small. There is one other factor which is very important. No oil has been produced in East Texas to date with air lift. Some day this will be done and at that time it will further complicate the natural gasoline possibilities. Undoubtedly there is some natural gasoline in this area, but I am sure any major company would hesitate to build plants in the face of present conditions and the production difficulties.

To sum up production, undoubtedly we can look for a gradual decline in production until fall, with a probable decline to as little as 5,200,000 gallons per day. Under normal conditions this would mean a shortage of natural this fall, but under present conditions, will probably be too much. Looking beyond this year, there is this much to be said: If many successful gasoline plants are built in East Texas, the natural gasoline industry will be very materially crippled for a long time to come as the price will be very low. If present plants with their declining production are all we have to worry about, undoubtedly consumption will catch up with production and we will get a fair return for our natural gasoline as we have in former years.

In the face of present conditions, you gentlemen probably would like me to start a brief discussion of what we are to do at the present time. Our natural gasoline represents 10 per cent of the total motor fuel sold in the United States. If this amount of gasoline were being sold by the refiners at the price it is being sold by the natural gasoline manufacturers, the refining divisions would either be broke or all shut down until the situation cured itself. I believe this cheap natural gasoline has an appreciable effect on the refining market and must

(Continued on Page 48)

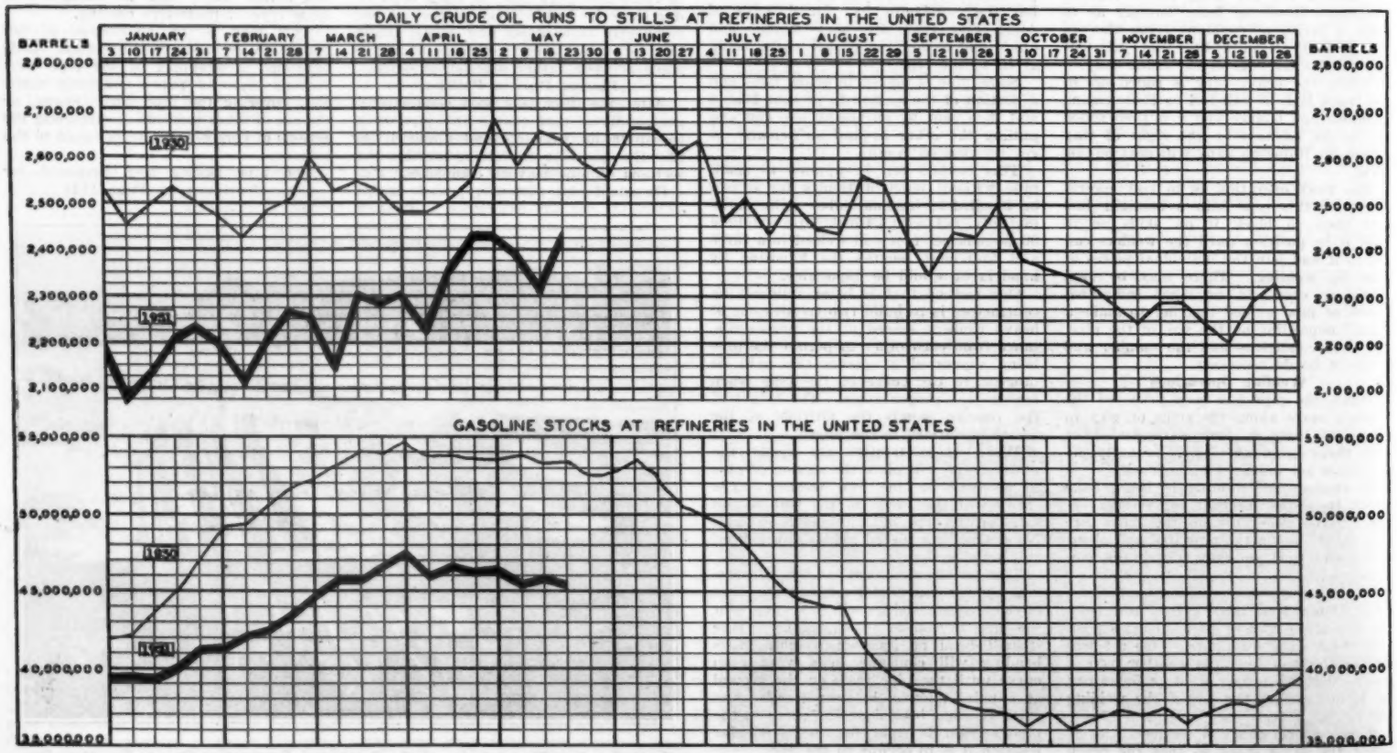
*Annual meeting, Natural Gasoline Association of America, Tulsa.

AMERICAN PETROLEUM INSTITUTE WEEKLY REFINERY STATISTICS

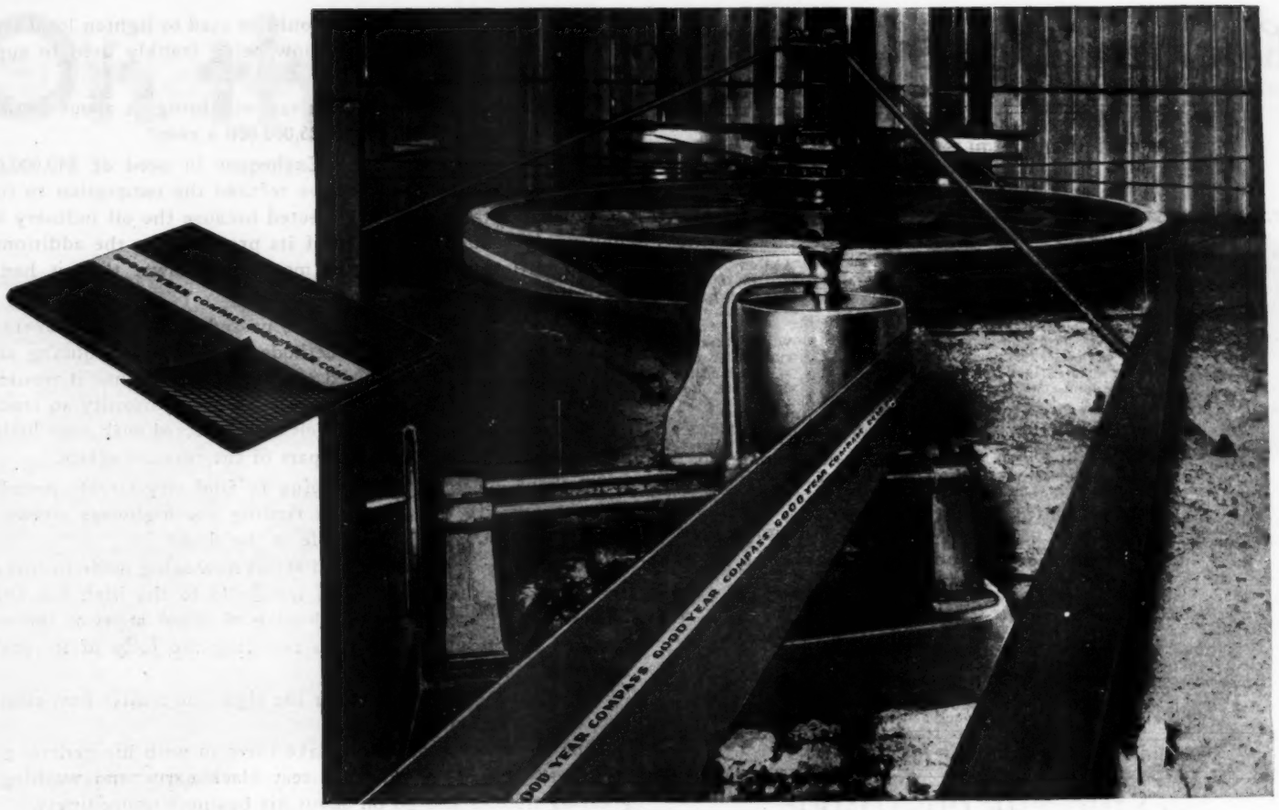
The weekly report made to the American Petroleum Institute on refinery statistics—crude runs to still, gasoline stocks and gas and fuel oil stocks in barrels—for the week ending May 23.

	Week ending May 23				Week ending May 16				Week ending May 24, 1930			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	100.0	455,000	8,414,000	8,580,000	100.0	492,900	8,442,000	8,638,000	100.0	471,287	9,033,000	7,348,000
Appalachian	93.8	91,400	1,653,000	1,036,000	93.8	87,400	1,642,000	1,125,000	91.0	97,714	1,528,000	776,000
Indiana, Illinois, Kentucky	97.5	336,700	6,432,000	3,671,000	97.5	332,300	6,382,000	3,653,000	91.5	326,857	5,391,000	3,671,000
Oklahoma, Kansas, Missouri	89.4	278,300	2,664,000	4,225,000	89.4	274,700	3,676,000	4,064,000	89.8	317,287	4,753,000	4,222,000
Texas	91.9	560,300	8,154,000	9,583,000	91.9	574,000	8,022,000	9,341,000	90.8	592,571	7,270,000	10,547,000
Louisiana and Arkansas	98.3	160,100	2,336,000	2,389,000	98.3	170,600	2,208,000	2,410,000	96.8	173,286	2,577,000	1,885,000
Rocky Mountain	93.1	60,300	1,894,000	853,000	93.1	61,100	1,897,000	845,000	93.6	59,143	2,813,000	1,128,000
California	98.8	469,700	12,902,000	98,218,000	98.8	441,100	13,393,000	98,408,000	99.3	549,286	15,818,000	107,986,000
Total United States	95.7	2,441,700	45,449,000	128,555,000	95.7	2,434,100	45,663,000	128,484,000	95.7	2,587,431	52,482,000	137,563,000
Texas Gulf Coast	100.0	419,400	7,011,000	6,795,000	100.0	429,700	6,863,000	6,629,000	100.0	440,000	6,105,000	7,755,000
Louisiana Gulf Coast	100.0	104,900	2,198,000	1,467,000	100.0	116,300	2,056,000	1,502,000	100.0	12,429	2,182,000	1,009,000

(1) Per cent refinery capacity represented. (2) Daily crude runs to stills. (3) Gasoline stocks. (4) Gas and fuel oil stocks.



*Data for 1931 based on weekly reports of the American Petroleum Institute. Figures for last week not shown in graph but are included in above tables.



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TELLING THE CUSTOMER

The oil business today presents the strange spectacle of a great industry slashing its prices to a point where it is easier for the politicians to increase the tax on its product.

A very frank illustration of the encouragement given by cheap prices to increasing the tax on gasoline was given by the British Chancellor of the Exchequer, Philip Snowden, in announcing a 50 per cent increase in the British tax on motor spirit from 8 cents to 12 cents per gallon.

Confessing that he did not like the tax, which he opposed when launched in 1928, he said: "I find the tax in existence and fruitful in its yield and the stern necessity of the emergency alone compels me to make use of it for the time being." The English press describes it as "revenue without tears."

"The consumption of oil," he said, "has steadily increased since the tax was imposed in 1928, despite the rise in the price of petrol by 4½ pence (9 cents) a gallon which then occurred and a further subsequent rise of 5 cents in March, 1929. Last September, however, the price was reduced 4 cents per gallon and a further similar reduction was made again only last month. I am told that the trade is only awaiting the introduction of this increase to make a still further reduction in the price of petrol.

"The increase will therefore still leave petrol no dearer than it was before March and lower in price than it was before last September. The price will indeed be slightly less than when the original tax of 4 pence (8 cents) was imposed in 1928."

Mr. Snowden was right; the price was reduced 2 cents a gallon this week, right after the tax was increased to 12 cents a gallon.

Incidentally, one member of parliament remarked during the debate that the new tax compared to the cost of petrol per gallon meant about 200 per cent. "Petrol," he said, "is being imported at a cost as low as 3½ pence (7 cents) a gallon landed in this country."

Motorists in this country (Oklahoma for example, where the service station signs read "gas, 5 cents; tax, 5 cents") are not the only victims of a tax that has been found "fruitful" and easily extracted from the public pocket.

In England, as in this country, the tax on gasoline has got far from its original aim. There it was supported by motorists in the belief that it would be substituted for the tax on horsepower. Now they have both to pay.

The early pretense that it would be used to lighten local taxation was soon forgotten and it is now being frankly used to supply a deficit in the national budget.

The increase in the British tax will bring in about $40,000,000, the 12-cent tax aggregating $125,000,000 a year.

What Chancellor of the Exchequer in need of $40,000,000 to balance his accounts could have refused the temptation to turn to so fruitful a tax so easily collected because the oil industry has so obligingly reduced the price of its product that the additional tax would still leave the cost of motor fuel lower than it had been before the tax was originated?

The oil industry has not alone passed on to its customers all it has gained from improved methods of finding, producing and refining oil, but it has reduced the price so low that it would be a shame for the tax leviers to overlook the opportunity so freely offered to impose a tax so little felt and collected with such little outlay of effort or money on the part of the revenue office.

Talk of buccolic youth hoping to find city streets paved with gold the reality of politicians finding the highways strewn with millions puts the early-day fable in the shade.

Judging by the more general effort now being made in this country to attract the attention of motorists to the high tax and the cheapness of gasoline by the display of larger signs at the service stations the industry at last is realizing the folly of its previous inaction.

But it is a question whether the signs, no matter how conspicuous, will be effective.

The average motorist will take them in with his general glance at the station, its distillation test blackboards and washing and greasing notices and go on about his business unheedingly.

Suppose service station attendants were trained to say to the customer "So many gallons, so much; tax, so much" when the motorist was passing over his money, what man or woman would fail to notice the large share of his gasoline bill which goes to the tax collector?

It has been said that the gasoline tax is not felt because so little is paid at the time, but if motorists were reminded in some such direct way each time they filled their tank just what proportion of their money was being paid for gasoline and how much was going for tax a lot more attention would be given to the effects of this painless extraction.

A man or woman may drive into a filling station with signs staring them right in the face with the same information but they may be thinking of something else, talking to a companion, or watching the passers-by without the sign registering a particle.

But when they are going down into their pockets to pay the bill their mind is right on that subject and open to the information, if politely offered, that they are paying so much for motor fuel and so much additional for taxation.

It would be no extra burden on the attendant's conversational efforts, it need take no more time, it could not but be taken in good part by the customer and eventually it might build up a popular opinion that would be sufficiently interested to do something about it when the next attempt was made to increase the tax.

There will never be so good a time as right now with prices so absurdly out of proportion to the tax rate.

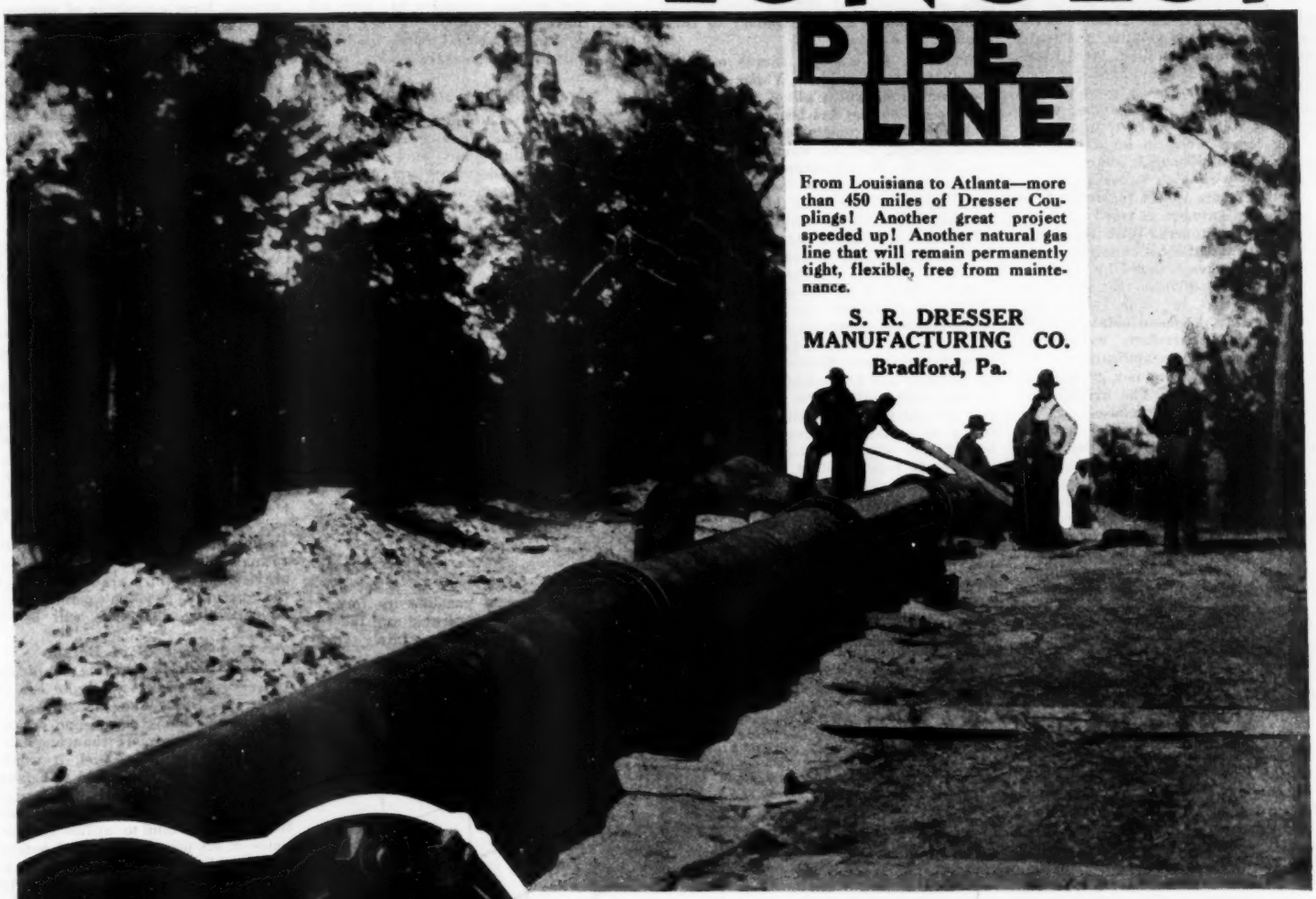
Take Oklahoma for example. "Ten gallons, 50 cents; tax, 50 cents." Or "Twenty gallons, $1; tax, $1." Being reminded of the actual money paid in tax, whatever its proportion, would have a cumulative effect worth while.

An effort of this sort is needed if there is to be any brake put on the tax on gasoline, otherwise no one can guess to what rate the spending needs of legislatures may increase it.

An 8 cent tax is already talked of in Florida, and Nebraska has been reported discussing a 12-cent tax. A 10-cent tax is not very far away if the steady trend is maintained and, low as the prices of gasoline are, the refiners will find their efforts to adjust them to a living rate handicapped by every cent added to the tax burden.

Why not try telling the customer when he pays his bill where his money goes?

On the SOUTH'S LONGEST PIPE LINE



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ELIMINATE

Natural Gasoline from Refiners' View

Stabilization Mutual Problem of Both Industries. Vapor Recovery Plants Are Not Eliminating Manufacturers' Market

By Emby Kaye
Skelly Oil Co.*

Because of the nature of our products, natural gasoline, we were forced to "stabilize" our particular gasoline early. The material was too volatile, and in its transportation and handling, large losses were experienced. Moreover, this characteristic brought about the promulgation of special shipping regulations which limited that volatility at least in a sense. Handling losses were so large that the consumer looked with disfavor upon natural gasoline with high vapor pressures, and manufacturers looked for relief from the excessive outages charged back to them by the consignees. With the development of fundamental analysis, and after the researches fostered by the Natural Gasoline Association, the manufacturer learned that by properly controlling the volatility, he could obtain a higher net income. Wherefore, we saw a rapid development of stabilization.

The same forces were not at once at work at the refinery. The refiner desired volatility and purchased it, or thought he did, in the form of natural gasoline. It required a decade, the fuller development of cracking, and the general installation of vapor recovery systems, for stabilization or rectification to catch the imagination of the refiner. When vapor lock was laid down at the door of the laboratory of the refiner by the sales manager, he at once sought to check excessive volatility by specifying more stable naturals, but he soon found that the difficulty was not so much with the purchased material, the volatility of which the larger manufacturers were by this time controlling, as with his own vapor recovery gasoline, pressure distillate, and straightrun gasoline, if you will.

Stabilization at Refinery

Slowly but certainly, the refiner studied the sources of vapor lock. He adopted the technology of the gasoline manufacturer, lock, stock, and barrel, and installed a stabilizer for the processing of his vapor recovery gasoline, possibly the largest source of excess volatility. Then he found that the pressure distillate—the product of the cracking unit—contained propyline, propane, and excessive amounts of butanes. He therefore debutanized the pressure distillate by taking off overhead about 20 per cent of the material which, when condensed, was rectified by the vapor recovery plant stabilizer. Rectification of less than 20 per cent of this material would be adequate to assure the desired stabilization, but as much overhead is taken over as color and gum limitations permit, because the rectification of this cut eliminates the necessity for acid treating and rerunning this material, for one thing, and, for another, improves the antiknock qualities of the gasoline otherwise destroyed by acid treating.

Analysis has shown that considerable propane is found in straightrun gasoline. In those plants where shell type stills are used, it is possible to eliminate the propane by simply allowing the first two gasoline streams to run hot, as, at a temperature of 150°, the stream will be propane free; and the propane, together with other components that have not been condensed at this temperature, passes on into the vapor recovery system where the desirable gasoline is absorbed and the fixed gas rejected in the process of absorption and rectification.

In pipe still operation, I see no reason why the same results cannot be obtained through the medium of running primary condensers at a higher temperature than the final coolers and permitting the fixed gas to leave the condensers by way of a gas separator, and the balance of the gasoline cooled in the secondary or final coolers.

There is yet another source of fixed gas in the final product. Vapor recovery gasoline, from which all of the propane and excess butane has been rejected, has been found to be unstable on withdrawal from storage, as and when use required material to be transferred as blending stock. The gasoline manufacturer will observe that he had, and has, the same problem. The refiner simply has a more difficult task because the residue gas at the refinery, which is ordinarily used to maintain pressure on the storage tanks, contains higher percentages of propane and butane than does normal residue gas in a gasoline plant in the field. It is not uncommon to see 1 per cent propane in vapor recovery gasoline, from which all propane had previously been removed. In one case with which I am familiar, dry natural gas, previously analyzed and found to contain practically no propane but a trace of butane, has been used to replace the regular plant residue gas for this particular service.

Treating Methods

Except for acid treating of pressure distillate, required by its high sulphur and gum content, practically the same processes of gasoline treating are in vogue in refinery and gasoline plant. While in the gasoline industry the hypochlorite process is used more than sodium plumbite, this is true because the hypochlorite process is simpler and generally adapted to gasoline of low sulphur content. In the refinery, the reverse is true, and sodium plumbite has here almost universal acceptance. Vapor phase treating is highly special and is used only to a limited extent, as are several other chemical processes.

Natural Gasoline Requirements

The increasing acceptance of cracking, both for economic reasons and for the production of high quality fuels, has from year to year made more and more refineries almost self-sustaining from the standpoint of natural gasoline requirements. Whereas a decade ago a 10,000-bbl. plant produced 200 bbls. of vapor recovery gasoline, today there are many plants of 15,000 to 20,000-bbl. throughput which are producing 1,000 to 1,400 bbls. of vapor recovery gasoline and are shipping in from the outside only about 200 bbls. of natural gasoline per day. I do not mean to infer that refineries can be self-sustaining or that they can produce the highest quality fuels without the addition of outside natural gasoline, but it appears to me that if a refiner is forced by high prices to do so, he can produce a somewhat less desirable fuel and get by with the purchase of little or no natural gasoline to supplement the production of his vapor recovery plant.

Certain it is, though, that the development of cracking has in a measure taken from natural gasoline its former premium value as a desirable and indeed necessary component of a fairly good motor fuel.

There are, nevertheless, many refineries where, on account of the character of crudes and/or the particular cracking process, large quantities of natural gasoline are still required. Few refineries are to be found whose motor fuel is not measurably improved during the winter by the addition of natural gasoline. Witness the consumption of the total production last winter when the laid-down price of natural at the refinery was higher than the market price of motor fuel at the refinery. It is economical to build gravity by the addition of natural gasoline for those markets requiring high gravity fuels.

Those refiners who went "Blue" in April and who are cutting out the heavy naphthas from their regular gasoline and possibly taking out the light ends from their kerosene, find it necessary to use considerable natural gasoline to make a suitable third grade gasoline. This will be particularly true next winter as a low gravity, hodge podge fuel, without at least front end volatility, will not be acceptable even to the low price buyers. At the present time, with the differential between third grade gasoline and natural gasoline, there is a profit in such use of natural. In my judgment, the outstanding difference of refinery grades will not be so much in gravity or intermediate boiling points, as in antiknock ratings. There is no need to limit the gravity of the third grade fuel and hence the natural gasoline percentage. The knock rating difference will be "loud" enough.

Disposal of Butane

The refiner is learning to dispose of the excess butanes which he has in his plant. In times like the present, when fuel is exceedingly cheap, and butane has a value of little more than one-half cent a gallon for refinery fuel, it would appear that the refiner would so balance his operation as to permit him to purchase such natural gasoline on the outside as would enable him to utilize greater volumes of his otherwise wasted butane. He can do this by buying partially debutanized natural gasoline, blending it with his own butane, and thereby receiving for that butane the same price as he receives for his regular refinery gasoline. In most cases the saving in the freight on the 25 to 35 per cent butane in regular "AA" gasoline would allow him to pay a reasonable premium to the natural gasoline manufacturer for the partially debutanized natural gasoline, and yet lay that material down at such a price which, blended with his own butane, would show him a profit. I believe that a good deal of money can be made by the refiner who will purchase his natural gasoline requirements selectively through the means provided by the new specifications recently announced by the Natural Gasoline Association and heretofore discussed.

There are many problems common to both branches of the oil industry. The refiner is obviously advanced in the cracking field, which the gasoline manufacturer is just approaching in his researches for a proper outlet for excess butane and propane. On the other hand, the natural gasoline manufacturer is in the vanguard in problems of rectification. Both are interested in the product of the natural gasoline manufacturer. The refiner should absorb natural gasoline into his own fuels wherever possible and avoid its devolatilization into a product which would place it in a price competition with motor fuel itself, with continuing disastrous results.

As has been said, the integrated company which produces natural gasoline can help stabilise the situation and bring

(Continued on Page 116)

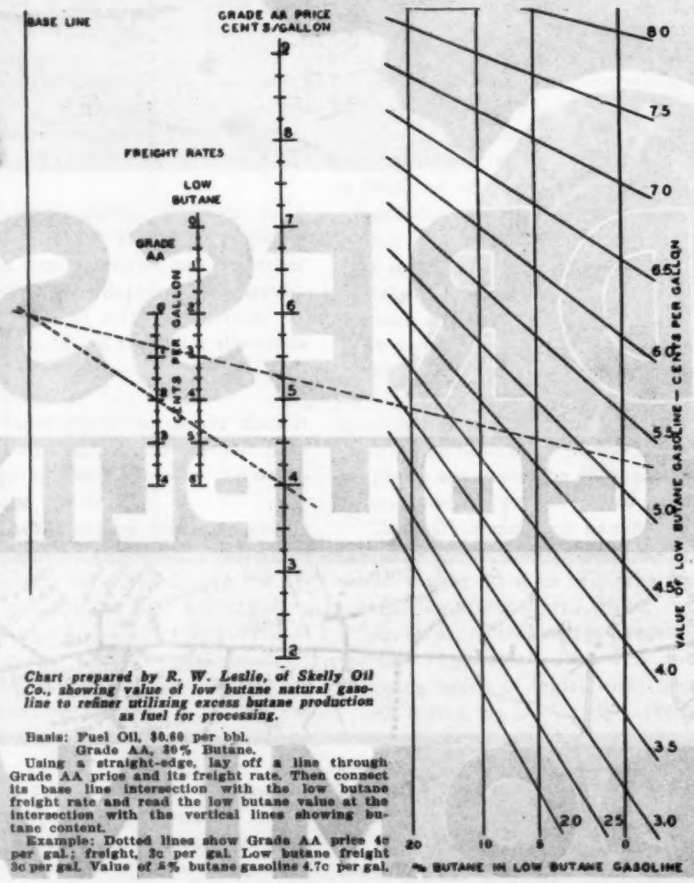

Chart prepared by R. W. Leslie, of Skelly Oil Co., showing value of low butane natural gasoline to refiner utilizing excess butane production as fuel for processing.

Basis: Fuel Oil, $0.60 per bbl.
Grade AA, 30% Butane.

Using a straight-edge, lay off a line through Grade AA price and its freight rate. Then connect its base line intersection with the low butane freight rate and read the low butane value at the intersection with the vertical lines showing butane content.

Example: Dotted lines show Grade AA price 4c per gal.; freight, 3c per gal. Low butane freight 3c per gal. Value of 5% butane gasoline 4.7c per gal.

*Annual meeting Natural Gasoline Association of America, May 21.

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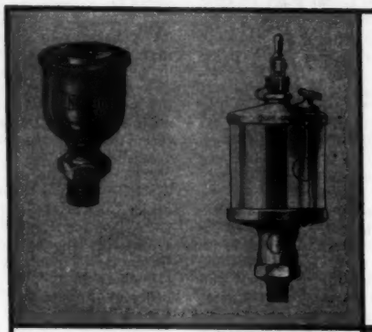

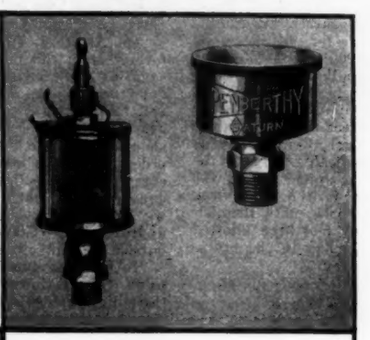

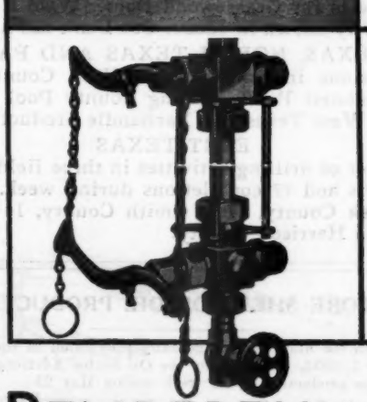

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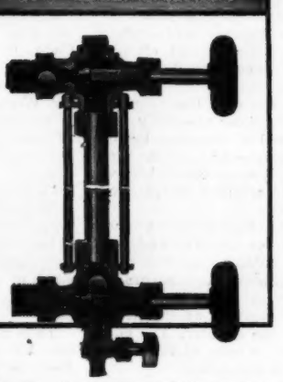

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East Texas Crude Prices Cut 30 Cents

Humble Oil & Refining Co. Reduces All Grades From Below 35 Up to 40 Degrees and Above and Gives Its Reasons

By Nell Williams

HOUSTON, Tex., May 26.—The Humble Oil & Refining Co. today cut its posted price for oil in the East Texas Field 30 cents per barrel. Beginning with a 25-cent price for oil below 35 gravity, the new schedule posts 35 gravity at 27 cents, with 2 cents added for each degree upward to 40 degrees and above which is posted at 37 cents. The new prices do not affect the Van, Mexia, Powell or other East Central Texas fields. They are applicable only to the Kilgore, Lathrop and Joiner areas, the production of which in the past week amounted to 303,762 bbls., notwithstanding the fact that they had been allowed only 160,000 bbls. per day in the proration order effective May 1.

The Gulf Pipe Line Co. met the Humble's schedule and prices shortly after the announcement of the price reduction was made.

The following statement was made by W. S. Farish, president of Humble Oil & Refining Co., following reductions in East Texas crude today:

"On April 21, 1931, we posted prices for oil from the new East Texas Field equal to Mid-Continent posted prices and announced a purpose to make connections and buy oil in the area ratably as soon as the Railroad Commission's order should be placed in effect. When the order went into effect we proceeded to carry out such policy and have increased our purchases until for some time now we have purchased at the posted price approximately 18,000 bbls. of oil per day outside of our own production.

"In our announcement of April 21 we said: 'The maintenance of the purchasing policy here announced for East Texas and the maintenance of the attached price schedule posted for all areas in the State are dependent upon better product values and upon the success of the Railroad Commission in the enforcement of its conservation program throughout the State.'

"Both of the conditions stated have failed. Product values have declined seriously since that time. The Railroad Commission's order for East Texas has been obstructed and made ineffective. The order fixes the allowable production at 160,000 bbls. per day. The actual production is in excess of 300,000 bbls. per day; and of this amount approximately 220,000 bbls. per day are moving at prices below our posted price, which has been 60 cents per barrel and above, depending on the gravity of the oil. More than 150,000 bbls. per day are moving from this field at 35 cents per barrel and below. In the face of this situation we have no alternative but to reduce our price. The principle on which we act was clearly stated in our price revision announcement of October 16, 1930, as follows:

"'When any considerable amount of oil is being sold from any field at less than the posted price (as is now the case in certain areas) the lower price establishes the market and readjustment of the posted price in the particular field must inevitably follow. We cannot continue to pay more for crude than others are paying.'

"The new schedule, which posts a price of 35 cents per barrel for East Texas oil of 39 gravity, contains a revision of the price for East Texas only. We are not at this time revising our posted prices for competitive oils being purchased by us elsewhere in the State, in the hope that orderly production may yet be established in East Texas in time to forestall the necessity for such revision."

Wall Maps Showing All Pipe Lines Will Be Published June 4

Large wall maps showing all oil, natural gas and gasoline trunk pipe lines in the United States will be included as an insert in the Annual Pipe Line Number of The Oil and Gas Journal to be published next week (June 4). These maps, printed on especially heavy bond paper, are the only ones of the kind available anywhere and this will be the first time all gasoline pipe lines in operation or under construction have been shown on a large map. Additional copies of these maps may be procured from The Oil and Gas Journal at $1 each but there is no extra charge for the Annual Pipe Line Number with the map included.

The survey of The Oil and Gas Journal indicates there are approximately 106,000 miles of oil pipe lines in the United States; 65,000 miles of natural gas trunk pipe lines; and about 3,800 miles of gasoline pipe lines in operation or under construction.

In addition to the large wall maps, the Annual Pipe Line Number will contain detailed maps of the principal oil and natural gas pipe line systems throughout the United States.

Every phase of the pipe line industry will be covered in articles especially prepared for the Pipe Line Number by engineers and leading executives of the pipe line industry and all articles will be profusely illustrated with pictures and graphs.

The demand for copies of the Annual Pipe Line Number of The Oil and Gas Journal always is greater than this company can supply. Subscribers, naturally, are all taken care of and the then remaining supply is prorated among newsstands throughout the country. The only sure way of getting a copy of this issue is to be listed as a subscriber.

SAN ANGELO CONGLOMERATES

SAN ANTONIO, Tex., May 25.—Resident geologists of San Angelo, Tex., have organized the San Angelo Conglomerates, a social club for geologists of the San Angelo area. The name is derived from the producing zone in Irion County's shallow sweet oil producing pool, 28 miles west of San Angelo. The president of the club will be "the big boulder," the vice president "second boulder," and the other officers will be given suitable geological terms.

Late Fields

NEW YORK-PENNSYLVANIA

CORNING, N. Y., May 25.—The Lycoming Natural Gas Co.'s No. 2 Close, in the Tioga Field, Tioga County, Pennsylvania, is a 20,000,000-foot gasser at a total depth of 4,019 feet.

The Wittmer Gas Properties' No. 1 Earnest, in the Wayne, New York, Field, is a 5,000,000-foot gas well at 1,680 feet.

J. T. Cunningham Oil & Gas Co.'s No. 1 Gleason, in the Wayne Field, tapped the Oriskany sand and was immediately shut in for pipe line connections.

WEST TEXAS

J. D. Wesner and others' No. 1 Nicks, located in Section 77, Block LL, T.C. Survey, Schleicher County, is shut down at a total depth of 4,005 feet in brown lime with 300 feet of oil in the hole and 500,000 feet of gas.

OKLAHOMA

The deepest drilling test in Oklahoma, Mid-Kansas Oil & Gas Co. and Ramsey Petroleum Corp.'s No. 6 Preston-Culp, NW cor. NE, Section 6-5-9w, on the west edge of the Cement Pool, in Caddo County, was drilling 7,431 feet in sandy shale. The test is drilling with rotary tools and it is expected to test the Wilcox sand formation.

Magnolia Petroleum Co.'s No. 2 Estes, SE cor. SW NE, Section 10-5-9w, on the east side of the Cement Pool, in Caddo County, was drilling at 4,640 feet, in shale.

Magnolia Petroleum Co.'s No. 1 Telford, SW cor. SE, Section 7-14-4, in the West Chandler Field, Lincoln County, was rigging up standard tools at a total depth of 4,923 feet in the Viola lime. The top of the Viola was found at 4,893 feet.

Twin State Oil Co.'s No. 5 Archer, SW cor. NE SE, Section 22-6-3, in Wanette Pool, in Pottawatomie County, on the

(Continued on Page 120)

LINE TO GLADEWATER

HOUSTON, Tex., May 25.—The Texas Pipe Line Co. is laying an 8½-mile extension of its East Texas line from Kilgore to the Gladewater area. The extension will be 8-inch welded. The main line from Kilgore southward is 10-inch. The extension is being provided chiefly to handle production of The Texas Company in the Gladewater area. Construction of a field pumping station at Gladewater also is under way.

High Spots in Field News

SOUTHWEST TEXAS

Saxet Field gas wells hold attention. Numerous sands encourage operators. Serpentine production in Bastrop County.

GULF COAST

New Field near Clear Lake in Fort Bend County. Heavy gas showing in test in Victoria County may open new fields.

CALIFORNIA

Kettleman Hills may increase state's production beyond refinery needs. New conservation law is being closely scrutinized.

OKLAHOMA

State Corporation Commission asked to increase allowable at Oklahoma City to 181,193 bbls. on new basis of zone output.

KANSAS

Kansas operators discuss pipe line from new central and western Kansas fields to Kansas refineries. Big potential estimated.

NORTH LOUISIANA-ARKANSAS

Another good gas well in Richland Parish. No completions in Zwolle area. Deep test for gas in Panola County, East Texas.

ROCKY MOUNTAIN AREA

Two deep tests for Greasewood Dome, Weld County, Colorado. Increased activity shown in Idaho. Cut Bank has new gas locations.

WEST TEXAS, NORTH TEXAS AND PANHANDLE

Two extensions in Barker area, Ward County, may connect Shipley and Bennett Pools. Loving County Pool may extend into New Mexico. West Texas and Panhandle production down.

EAST TEXAS

Total number of drilling activities in three fields 495 wells, with 141 first reports and 77 completions during week. Three wildcats drilling in Rusk County, 11 in Smith County, 14 in Nacogdoches County and 7 in Harrison County.

SCORE SHEET ON OIL PRODUCTION

Below is shown the allotted average daily production in the United States from April 1 to October 1, 1931, suggested by the Oil States Advisory Committee, and the actual daily average production in the week ending May 23:

	Barrels			
	Allotted	Actual	Over	Under
Oklahoma	550,000	541,950	.....	8,050
Texas	714,000	927,862	213,862	.....
California	500,000	537,500	37,500	.....
Kansas	110,000	106,270	.....	3,730
Arkansas	50,000	46,660	.....	3,340
Louisiana	65,000	70,283	5,283	.....
New Mexico	40,000	43,700	3,700	.....
Rocky Mountain area	60,000	54,505	.....	5,495
Eastern states	110,000	110,500	500	.....
Total	2,199,000	2,439,230	260,845	20,615

Total net average daily overproduction, 240,230 bbls.

TRANSIT'S Chief Engineer

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Mr. Sharp's services have always been at the command of our customers and prospective customers. He will now be free to devote more time than ever to this phase of his work.

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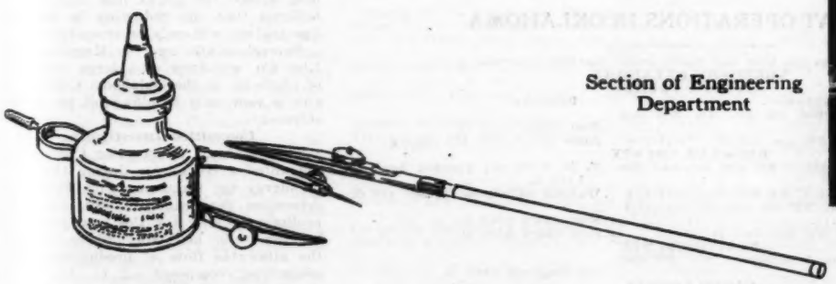

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NEW YORK PHILADELPHIA CLEVELAND PITTSBURGH LOS ANGELES HOUSTON TULSA NEW ORLEANS

Ask Higher Allowable From Okla. City

Corporation Commission Asked to Permit 181,193 Bbls. Per Day To Be Taken. Production Down in Past Week

By W. A. Spinney
Staff Correspondent, Oklahoma Fields

An important proration meeting is scheduled for May 28, at Oklahoma City, when the Oklahoma Corporation Commission will fix the allowable production for the entire State during the next four months.

The State's production was below the allowable by approximately 8,000 bbls. a day in the week ending May 23, when the average was 542,000 bbls. a day. The decline from the previous week's gauge was approximately 31,500 bbls. a day. Most of the State's decline was in the Oklahoma City Field, which fell to approximately 143,000 bbls. a day from 173,570 bbls. the previous week.

A showing of oil was found in a wildcat test west of production in the Greater Seminole area. It is the first oil showing found in the well. The test is Amerada Petroleum Corp. and others' No. 1 Jones, SE cor. NW, Section 21-8-3, in the Tecumseh area of Pottawatomie County. The oil showing was found in the Hunton lime at 4,778 feet and the test is shut down.

Pipe lines from the Greater Seminole area were busy the week ending May 23, when an average of 180,891 bbls. of oil was shipped from the area. Out of the Seminole Field was shipped 136,426 bbls. of oil, St. Louis area 24,280 bbls., Konawa 10,437 bbls. and Wanette area 7,838 bbls. a day.

Some operators with production in the north Wilcox sand area in the Oklahoma City Field, are claiming the reclassification of the area will bottle up their production until it will not be profitable to open up wells. They claim that Greater Seminole area is only being prorated 50 per cent of its potential and that the rest of the fields in the State outside of Oklahoma City are prorated less than that.

Operators point out that many of the Arbuckle lime producers have paid out and the total recovery on the 119 lime producers is approximately 16,960,100 bbls. of oil to May 1, being an average of 142,521 bbls. per well. The discovery well in the field was a lime producer and it shows a total recovery of 1,036,665 bbls. of oil to May 1. It was completed by the Indian Territory Illuminating Oil Co. Same company's Button lease which is producing from the Arbuckle lime shows a recovery of 251,327 bbls. of oil from five wells. The Mid-Kansas Oil & Gas Co.'s Fortson lease with five wells shows a recovery of 374,741 bbls. each. In the north end of the field the Phillips Petroleum Co. has 41 producing wells with a recovery of only 46,674 bbls. and 24 other wells in the north Wilcox sand area show an average of approximately 31,600 bbls.

Oklahoma City Allowable

An increase in the allowable production from the Oklahoma City Field from 160,387 bbls. a day to 181,193 bbls. a day, with the production apportioned on a new basis from four different producing horizons, is asked in an application filed with the Oklahoma Corporation Commission, May 22, by Wirt Franklin, representing the State Proration Committee.

Hearing on the application was set for May 28, Paul Walker, chairman of the commission, announced. The same day was set to hear the petition of Otto Bradford, field umpire in the Oklahoma City Field, which requested a hearing to determine potential and reasonable market outlet for crude from the Oklahoma City Field and for the fixing of the potential percentage to be taken from the wells during the months of June, July, August and September.

The first application asked the commission to issue the order to extend from June 1 to September 30. The proposed order would increase the flow from all the horizons in the Oklahoma City Field, and is based on one-third of the present allowable. The gauges were taken on all the wells in the field on a four-hour basis and totaled 8,019,345 bbls. The present allowable from the Oklahoma City Field is fixed at 6 per cent of the one-third of the potential.

In all previous proration orders the Corporation Commission has treated the Oklahoma City Field as if the entire area was a common source of supply, but now the progressive development of the area has demonstrated there are at least four common sources of crude oil.

The application lists as the first source of supply in the field, the Arbuckle lime area, in which the discovery well was located and where there were approximately 115 wells completed, with a total of 72 producing at the present time. The application asks that there be virtually no restrictions on this area, and recommends 75 per cent of its potential production be allowed.

The next horizon considered is the Simpson sand area, including several producing horizons. It is recommended for a 10 per cent allowable of its potential production. The South Wilcox sand area, where the number of wells drilled is limited to one on each 10 acres, is recommended for 10 per cent of its potential. The North Wilcox sand area, the most recent to be opened and developed as a common source of supply, is recommended for 3 per cent of its potential.

The application states that the large production per well in the North Wilcox sand area is believed to be due to the close spacing of wells and the gauging of one well at a time has resulted in a potential production for 10-acre tracts ranging from 50,000 to 300,000 bbls. If the present method of proration is continued in the Oklahoma City Field, it may result in discrimination against the older pools in favor of the North Wilcox sand area, and may result in further and additional waste of the recoverable reserve of oil in the older portions where water encroachment now exists.

Under the proposed order the average allowable flow of oil per well would be as follows: From the Arbuckle lime, 444 bbls.; in the intermediate zone, 178 bbls.; South Wilcox sand, 375 bbls.; the North Wilcox sand, 353 bbls., and wells producing east of the fault line, 95 bbls.

Oklahoma City Completions

During the week the following wells were completed in the Oklahoma City Field for the week ending May 23: Phillips Petroleum Co.'s No. 1 Sam, SW cor. SE NE Section 3-11-3w, in the north end of the pool, flowed 981 bbls. of oil in 30 minutes before being shut in. The oil was found in the Wilcox sand at 6,297-6,400 feet. The gauge indicates the well may be a 40,000-bbl. producer. The gas was estimated at 62,000,000 feet a day.

H. F. Wilcox Oil & Gas Co. and Anderson & Kerr's No. 1 James, SW cor. NW NW Section 10-11-3w, flowed 252 bbls. of oil in 15 minutes and later made 3,916 bbls. of oil in four hours. The Wilcox sand was found at 6,440-6,530 feet. The gas was estimated at 20,000,000 feet a day.

Courter Oil Co.'s No. 1 White, SE cor. NW SW NW Section 10-11-3w, on the west side of the field, flowed 2,291 bbls. of oil in three hours from the Wilcox sand at 6,417-6,538 feet. The gas was estimated at 18,000,000 feet a day. Don Leon Oil Co.'s No. 1 Burt, SW cor. NE NW NW Section 10-11-3w, flowed into the slush pits and no gauge was taken. The oil was found in the Wilcox sand at 6,375-6,537 feet.

Five new locations were made during the week in the Oklahoma City Field: H. F. Wilcox Oil & Gas Co., one; Tom Slick Oil Co. and others, three, and Skelly Oil Co., one. For the week ending May 23, 772 wells have been completed in the field, and 55 were drilling or waiting for cement, 52 operations were listed as rigging up, preparing to spud, or locations, making a total of 879 operations in the Oklahoma City Field.

Most Northwesterly Test

The most northwesterly test in the Oklahoma City Field is expected to reach the pay horizons in a few days. It is located about a half mile to the west and may open up considerable territory to be developed. The test is the Capitol Producing & Refining Co.'s No. 1 Refinery, SE cor. NE SE, Section 4-11-3w. The owners expect to reach the Wilcox sand at approximately 6,375 feet. It was drilling at 6,310 feet on the last report. If a producing well is found at the location it will bring the development closer to the business district of the city. It is located at the foot of Robinson Street and south of the Frisco-Rock Island tracks.

The Watchorn Oil & Gas Co.'s No. 1 Traders Compress, NW cor. SE SE, Section 34-12-3w, an extension well in the northern part of the Oklahoma City Pool, completed its four-gauge making 8,167 bbls. of oil in four hours, from the Wilcox sand at 6,281-6,446 feet.

A new location was announced by Skelly Oil Co. for No. 1 Spencer, NW cor. NE SE, Section 15-11-3w, on the west side of the capitol city field, located in Block 7 of Fruitland addition. It is the north offset to the Oklahoma City Petroleum Co.'s No. 1 Lively, in the same section which was recently completed with a potential of 38,532 bbls. a day.

Patton Sells His Interest

H. H. Patton has sold his interests in seven producing wells in the Oklahoma City Field, the interests going to his partners. The partners acquiring the interests are Wilcox Oil & Gas Co., Anderson & Kerr Drilling Co., Charles Hubbard Drilling Co., and Dabney and Johnson. The interests included seven Wilcox sand producing wells with a potential of approximately 100,000 bbls. a day, and two drilling wells.

Some operators in the Oklahoma City Field opposed the reclassification of producing wells in the field at the last regular meeting. It was proposed that wells be classified in the lime producing zone, the detrital zone, comprising the Johnson and School Land sand zone, north Wilcox sand, and south Wilcox sand zones. It was suggested that the matter be referred to the Oklahoma Corporation Commission.

The Stanolind Pipe Line Co. reduced its shipments from the field during the week, while the other pipe line companies have been holding their nominations at the regular amounts. The Stanolind Pipe Line Co. has reduced its takings while it is emptying the oil from its pipe line from Wyoming to a point south of Kansas City, Mo. This line has been leased for a gas pipe line. It is believed that the reduction in its pipe line takings will only be temporary.

Several months ago the Magnolia Pipe Line Co. withdrew as a large purchaser of crude oil in the Oklahoma City Field, and is now only handling oil for tender shipments.

Committee Investigating

The Oklahoma Corporation Commission appointed a committee during the week to survey the Oklahoma City Field and determine the crude oil situation as a preliminary step for the new proration hearing to be held May 28, to readjust the allowable flow of production. The committee, composed of C. E. Risen, superintendent of production for the Indian Territory Illuminating Oil Co.; B. G. Patton, Plains Petroleum Co., and W. N. Stokes, representing the Tom Slick Oil Co., will ascertain the quantity of underproduction and overproduction and report to the commission.

Two tests in the Carr City Pool, in Seminole County, found showings of oil in the Hunton lime during the week, and were drilling deeper. Amerada Petroleum Corp.'s No. 1 Tiger, NE cor. NW SE Section 3-8-5, cored the Hunton lime at 3,970-77 feet, where a showing was reported. Same company's No. 2 Tiger, SE

(Continued on Page 97)

WILDCAT OPERATIONS IN OKLAHOMA

(Descriptions are East and North unless marked otherwise)

NORTHERN OKLAHOMA

ALFALFA COUNTY

Company, farm and location—	Remarks:
Smith Brothers' No. 1 Forbes, SE cor. NW NW Sec. 12-27-11w	Shut down 1,232 ft.
J. W. Bailey's No. 1 Acre, SW cor. NE Sec. 14-24-11w	Show oil 5,418-30 ft.; fishing.

BECKHAM COUNTY

Price-McFann's No. 1 Webster, C SW SW Sec. 34-8-26w	T. D. 2,344 ft.; plugged back to 1,900 ft.
Mid-Continent's No. 1 Schaff, C NE SW Sec. 22-11-22w	Waiting on cement to set 426 ft.
Mid-Texas Co.'s No. 1 Sidell, NE cor. SW SW Sec. 17-2-22w	Shut down 2,550 ft.
White et al's No. 1 Green, SW cor. Sec. 34-10-24w	Shut down 3,575 ft.

BLAINE COUNTY

Washoma Oil Co. et al's No. 1 Phillips, C NW SW Sec. 13-19-10w	Cleaning out 4,665 ft.

CADDO COUNTY

Abernathy & Brown's No. 2 Houston, Sec. 24-6-13w	Shut down 1,115 ft.

COAL COUNTY

McGraw Oil Co.'s No. 1 Ward, NE SE Sec. 35-1-8	Drlg. 1,155 ft.
Whitney et al's No. 1 Miller, SE NE Sec. 10-2-8	Shut down 760 ft.

COMANCHE COUNTY

G. W. Stogner's No. 1 Doebel, C SW SW Sec. 3-3-9w	Shut down 1,450 ft.
J. R. Travis' No. 1 Pickett, NE cor. Sec. 3-1-11w	Drlg. 810 ft.

GARFIELD COUNTY

E. L. Love et al's No. 1 White, SE cor. NW Sec. 9-24-6w	Shut down 5,850 ft.

GARVIN COUNTY

Malarnee et al's No. 1 Phillips, NE SW SE Sec. 34-2-2w	Drlg. 2,785 ft.
Skinner's No. 1 Elrod, SW cor. Sec. 13-2-3	Shut down 1,120 ft.

GREER COUNTY

French's No. 1 Murphy, SW NW Sec. 23-7-21w	Shut down 1,645 ft.

HARPER COUNTY

Sinclair Oil & Gas Co.'s No. 1 Howell, C SW SW Sec. 14-26-24w	20,000,000 ft. gas 5,350-5,400 ft.; total depth 5,539 ft.; shut down; sprayed 50 bbls. gasoline.

Kansas Producers Discuss Pipe Line

Considering Outlet From New Central and Western Kansas Fields to Kansas Refineries. Big Potential

By W. A. Spinney
Staff Correspondent, Kansas Fields

During the week operators and refiners with production in the western part of Rice County, and McPherson County, Kansas, announced they were working on plans for two pipe lines. The proposed pipe lines would handle oil production from the Voshell Pool, in McPherson County and from wells that are now shut in along the Ellsworth Arch in Stafford, Rice and Ellsworth Counties.

The Derby Oil Co. may construct a pipe line from its pipe line station and loading rack near Burrton, in Harvey County, to its refinery in Wichita. The company is shipping its production from the Voshell Pool, in a 4-inch pipe from the pool to the loading rack near Burrton and then loading into tank cars. The other pipe line is a proposed one that will be constructed from Valley Center, in Sedgwick County to the point near the Schurr Pool, near Raymond, in Rice County where gathering lines could be laid north and south.

During the week allowable production was reduced in the Ritz-Canton area to 8 per cent of the potential. The area is being prorated to 92 per cent, and unless the market outlet is increased the allowable percentage is expected to be again reduced in a few days. Approximately 60 wells have been completed in the Ritz-Canton area with a potential of 67,000 bbls. a day and the market outlet is only 6,300 bbls. a day.

Producers in the Voshell Pool, about 12 miles southwest of the Ritz-Canton area, are producing and marketing 100 per cent of their oil production. The Voshell Pool is producing approximately 18,000 bbls. a day at the present time.

The State's daily average production for the week ending May 23, was approximately 106,300 bbls., a decline over 1,000 bbls. a day compared to the previous week's gauges.

New operations in the Kansas fields continue at a steady rate. A total of 12 new operations were reported for the week ending May 22. McPherson County leads with 8 new operations; Sedgwick County, 2; and one each in Rice and Cowley Counties.

Possible New Pipe Line

A proposed pipe line to provide an outlet for the crude oil from wells now shut down without any market outlet in the western part of Rice, southern Ellsworth and northern Stafford Counties, in the central part of the State, is being considered. A group of Kansas producers and refiners has entered into negotiations which they hope soon will enable them to announce plans for the construction of a pipe line from the western part of Rice County to a point north of Wichita, in Sedgwick County.

The proposed line is expected to be an 8-inch, approximately 100 miles long, with the northwestern terminus near Raymond, in Rice County, in the Schurr Pool area, from which gathering lines would extend north into the southern part of Ellsworth County and southwest into Stafford County.

Companies mentioned as being interested in the project are the Standard Oil Co. of Kansas, Slick, Pryor & Lockhart, the El Dorado Refining Co. and the Vickers Petroleum Co. Such a pipe line would provide an outlet for crude oil from what is considered by many to be one of the largest producing areas yet found in the State.

A few wells have been completed in the area that have been estimated to have a potential of 35,000 bbls. a day. These big wells are shut in for lack of a market outlet. Some of the wells were drilled and completed 18 months ago and practically no oil has been sold from them. The wells represent an expenditure of approximately $35,000 to $50,000 per well for development.

About a year ago the Prairie Pipe Line Co. built a line into the Schurr Pool, in Rice County. It had been in use only a short time when the company withdrew as a purchaser of crude oil on January 1, 1931.

The preliminary plan of the proposed pipe line has the eastern terminus at Valley Center, Sedgwick County, where it could be connected with the Empire Pipe Line Co.'s line. This line would then carry the crude oil to Eldorado, where it could be diverted to the Vickers Petroleum Co. and the Eldorado Refining Co. plants and to the Standard Oil Co. of Kansas pipe line which has its western terminus there.

The project if completed is expected to aid the early development of oil production in an area which will cover approximately 40 miles in length and several miles in width in the central part of the State.

New Proration Law

During the last week a committee of oil operators and members of the Public Service Commission met at Topeka to discuss the new proration law passed by the last legislature. The members of the Kansas Public Service Commission express the opinion that they would probably name a committee of representatives of the oil industry to act in an advisory capacity in the administration of the State's new proration law. The proration law becomes effective upon the publication in the statute book which is expected to be on or near May 28.

The Kansas Public Service Commission proposes to permit the oil operators and producers to assist in the enforcement of the proration law. A committee of oil producers and the Public Service Commission will work together to consider each pool in the State and their marketing outlet. Members of the commission said there would be no statewide proration but it would be on a unit basis in separate areas on the same unit plan which is now in effect by voluntary agreement in the Ritz-Canton Pool, in McPherson County.

The delegation of producers said that the Ritz-Canton Pool now had a potential of approximately 60,000 bbls. a day from 56 completed wells and 50 more were drilling in the area on May 21. The pipe line outlet for the area is only approximately 6,300 bbls. a day, and the Public Service Commission suggests that the pool continue to operate on the same basis, under the unit plan, the same as the Hobbs Pool in New Mexico.

The pipe line outlet of the pools is expected to determine the amount of proration percentage. It was agreed by all present that there was no immediate need of a statewide proration.

The conservation act was published in The Oil and Gas Journal on March 19, 1931. The act was originally patterned after the Oklahoma proration law, but was subjected to changes. It gives the Public Service Commission the power to regulate the production to prevent waste, and to regulate the taking of crude oil from any one common source of supply within the State to prevent the inequitable draining from a common source of supply but it does not apply to wells making less than 15 bbls. a day.

The power to enforce the conservation act is given to the Public Service Commission.

Western Field Operations

Another well was completed in the Schurr Pool, near Raymond, in Rice County, Producers & Refiners Corp.'s No. 3 Thompson, SW cor. SE NW, Section 21-20-10w, was shut down with a hole full of oil from the Silicious lime at 3,327-41 feet. The entire pool is shut in without any pipe line outlet. Fourteen oil wells have been completed in the vicinity of the above well with an estimated potential of 15,000 bbls. of oil a day and one gas well, was completed in the edge of the oil producing area. The Prairie Oil Co. constructed a pipe line into the area last year but quit buying oil January 1, 1931.

The most western operation in the State was abandoned during the week as a dry hole. It was Hydraulic Oil Co.'s No. 1 State Land, NW cor. SE, Section 22-34-43w, Morton County, and drilled to a total depth of 3,640 feet. It is located within 3 miles of the Colorado state line. The test is west of the gas production in the Hugoton gas field.

The deepest drilling test in the Hugoton gas field is Argus Production Co.'s No. 2, C NE, Section 10-33-39w, Stevens County, which was drilling around 5,465 feet. The owners expect to test the Simpson sand horizon and is pioneering the deep formations in the Hugoton gas field.

A new wildcat test is being started in Rice County by Fitzwilliams Petroleum Corp. on the Ellsworth Arch. The test is No. 1 Blake, NE cor. NW, Section 9-18-10w, on a block of 240 acres. The well is located about 5 miles northwest of the Ploog well, the discovery well in the Silicious lime, in the area. A short distance south of the new test another one was drilled several years ago which found a showing of oil indicating the area is favorable for oil production.

Two failures were reported in Greenwood County. Harry Gore and others' No. 1 Edwards, in Section 35-24-10, was drilled to a total depth of 2,125 feet and abandoned. The other test was Matthews and Rex's No. 1 Thrall, in Section 17-24-12, was drilled through the Bartlesville sand which has yielded a hole full of water and was abandoned.

Wyandotte's Shallow Gas

The shallow gas area in Wyandotte County in the northeastern part of the State is active. Production in the area is found in sand from 300 to 700 feet, where the open flow of new gas wells ranges from 500,000 to 3,000,000 feet a day. The majority of the wells are completed in four to seven days and are turned into the pipe line the next day. On account of the close proximity to markets there is a demand for all the gas produced. The field is located in Townships 10 and 11 and Ranges 23 and 24.

The central western part of the State with McPherson County leading the development has 64 active operations. Oil companies have reduced the rental on thousands of acres of leases from $1 to 50 cents and 25 cents an acre in the western part of the State, while in Ellsworth, Rice, Stafford and McPherson Counties there has been no reduction in the rentals. Rice County is believed to have a large potential from the Ellsworth Arch in the western part of the county and the Abilene Arch in the eastern part. In the western part of Rice County and in southern Ellsworth County a number of producing wells have been completed during the year and a half, the majority of which are shut in without any market outlet. A few of the others have been connected to loading racks and others are shut down on top of the sand waiting for better crude oil markets.

New Potentials

Potentials are to be taken at 13 new

(Continued on Page 98)

WILDCAT OPERATIONS IN KANSAS

(Descriptions are East unless marked otherwise)

Company, farm and location—	Remarks:
BARTON COUNTY	
Syndicate Oil Co.'s No. 1 Boertz, NW SE SE Sec. 13-18-12w	Shut down 2,440 ft.
Skelton Oil Co.'s No. 1 Ott, C SE SE Sec. 16-19-14w	Drlg. 2,200 ft.
McCool et al's No. 1 Tsern, NW SE NE Sec. 12-20-11w	Shut down 1,600 ft.
CHASE COUNTY	
Borden et al's No. 1 Atkinson, NW SE Sec. 18-18-7	Rig on ground.
CLAY COUNTY	
Crystal Oil et al's No. 1 Tivier, SW cor. Sec. 19-8-2	Shut down 2,500 ft.
COFFEY COUNTY	
Heyburg's No. 1 Kroft, SE SW SE Sec. 30-22-14	Shut down 1,300 ft.
Roberts et al's No. 1 Hay, SW SE NW Sec. 32-22-15	Shut down 1,250 ft.
COWLEY COUNTY	
Lehman et al's No. 1 Hill, SE NE Sec. 27-33-4	Drlg. 680 ft.
Fisher et al's No. 1 Hurt, C SW SE SE Sec. 11-34-3	Rig.
Roth & Faurot's No. 1 Reedy, SW NW NE Sec. 8-32-8	Shut down 1,040 ft.
DICKINSON COUNTY	
Severs et al's No. 1 Lavengood, NE SW Sec. 13-13-3	Shut down 3,850 ft.
ELLSWORTH COUNTY	
Gilmore Oil et al's No. 1 Sturm, NW SW Sec. 31-17-9w	Silicious lime 3,243 ft.; shut down 3,295 ft.
Hershey et al's No. 1 Schultz, C NE Sec. 9-14-8w	Underreaming 1,925 ft.
Alyward et al's No. 1 Stratman, SE NW SE Sec. 1-17-10w	Silicious 3,255-71 ft.; 117 bbls. 2 hrs.; shut in; est. 2,000 bbls.; no pipe line connection.
Aladdin Pet.'s No. 1 Stoddenberg, C SW Sec. 22-16-10w	Drlg. 1,270 ft.
Milton et al's No. 1 Kester, SE NE Sec. 6-14-9w	Drlg. 2,655 ft.
FORD COUNTY	
Carter Oil Co.'s No. 1 Everett, C NE Sec. 22-29-21w	Drlg. 3,623 ft.
Swain et al's No. 1 Taylor, C NW Sec. 21-25-24w	Drlg. 5,038 ft.
GRAHAM COUNTY	
Schleimeyer et al's No. 1 Clark, SW NE NE Sec. 11-9-25w	Drlg. 4,230 ft.
HARPER COUNTY	
Beeler et al's No. 1 Bear, C NE Sec. 21-36-6w	Shut down 1,830 ft.
KINGMAN COUNTY	
Skelly Oil's No. 1 Miles, NE cor. Sec. 30-27-10w	1,635-40 ft. 2,000,000 ft. gas; at 2,005-20 ft. 6,000,000 ft. gas; at 2,133-42 ft. 3,000,000 ft. gas; showing oil 3,385 ft.; T. D. 3,441 ft.; S. D.; estimated at 600 bbls. a day.
LYON COUNTY	
Sheedy et al's No. 1 Brown, C W half SE Sec. 10-20-11	Drlg. 1,800 ft.
MARION COUNTY	
Midwell's No. 1 La Master, NW cor. Sec. 31-22-4	Shut down 650 ft.
McPHERSON COUNTY	
Henderson & Holden's No. 1 Sommerfield, NE NW Sec. 23-19-1w	Abandoned 3,574 ft.
MORTON COUNTY	
Hydraulic Oil Co.'s No. 1 State Land, NW SE Sec. 22-34-43w	Fishing 5-in. csg. 3,460 ft.

Gasoline demand is going up, not down

In the next six months American motorists will buy 980,000 barrels more gasoline than the refiners made in the same period last year

But it must be the right kind of gasoline

This, according to estimates by the American Petroleum Institute committee appointed to appraise supply and demand

The motorist tells what kind of gasoline he wants No mistake about it

"Demand," to quote the com-

mittee's statement, "—has been influenced by the change in the characteristics of the gasoline demanded by consumers"

For example:

----It is expected that natural gasoline will supply 921,000 barrels less, straight-run gasoline 2,075,000 barrels less, and cracked gasoline 3,976,000 barrels more

Dubbs cracking is the way to make that "3,976,000 barrels more"

Dubbs cracking is the way to volume, quality and profit

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

Another Good Gasser in Richland Pool

Southern Carbon Co.'s Completion Only Successful Operation Reported in Entire Area. Failure in Mississippi

By J. R. Crumpton
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., May 25.—One good gas well, the only successful completion in this division, served to break the monotony of an uneventful week, but several wildcats of note, that consistently threatened recently to develop new fields, were abandoned. Southern Carbon Co. added another good well to its list of gassers in the Richland Field by completing No. 2-B Thompson, Section 23-16-6, with initial production of 32,796,000 feet of gas at 2,442 feet. This well tested salt water with a small show of gas recently, but was plugged back and casing recemented, resulting in a good producer.

In Bienville Parish, Coyle Brothers' No. 1 Lawhon, Section 15-16-8, was junked and abandoned at 2,866 feet. A recent core in this well produced a good show of oil and gas from 2,845 feet in sandy shale and 6-inch casing was set at 2,854 feet. When 1,600 feet of fluid had been bailed from the hole, the casing collapsed, making the abandonment necessary. If funds can be obtained, the operators will skid over and drill a new well. Practically the same operation was performed on Red Hawk Oil Co.'s No. 1 Matthews, Section 11-23-9, Webster Parish, when casing collapsed after bailing down 2,400 feet. The indications were that this test would have made a producer of some proportions, and another well will be drilled immediately.

The Lucky Strike Oil Co., in Red River Parish, after being shut down for several months, finally abandoned its No. 1 Chappraix, Section 32-12-10, at 3,010 feet. A drill stem test of this well from 2,820-3,010 feet produced a flow of 500 bbls. of salt water with a show of light oil, and an attempt to plug back to 2,900 feet to shut off the water flow was unsuccessful.

The Arkansas-Louisiana Pipe Line Co. abandoned its second test in Pope County, Arkansas, in as many weeks when No. 1 Baird, Section 11-7-20, was discontinued in black sand at 4,231 feet.

Mississippi reported only one completion, a failure in Grenada County, Carter Oil Co. and others' No. 2 Dubard, Section 18-22-4, dry and abandoned at 3,023 feet.

New Operations

Despite the many unsuccessful efforts of wildcatters and efforts in the proven areas to curtail production, new operations continue to be listed each week, the majority of them being rank wildcats. The Leue Oil Co. has spudded in on its No. 1 Kinder, Section 2-21-7, Claiborne Parish, on what is purported to be a deep test. The location is about 4 miles northwest of the Homer Field. Rellitt Oil Co. is rigging up to drill No. 1 Gannon heirs, Section 12-11-16, De Soto Parish, and Mack Jourden is drilling at 300 feet on a new test in Red River Parish, No. 1 Lockett, Section 32-13-10. Three new wells were started in the proven area of Sabine Parish and one in the Richland gas field.

In Cass County, East Texas, Everts Drilling Co. is rigging up on its No. 1 Whittington, L. Strong Survey, 7 miles northwest of the town of Linden. Panola County reports three new operations: Hoffer and others' No. 1 Cameron Lumber Co., W. W. A. LeGrone Survey, 10 miles north of Carthage; Jeffus and Lee's No. 1 Latham, William Rich Survey, 8 miles southeast of Carthage; and J. L. Nelson and others' No. 1 Williams, James Hanks Survey, 6 miles southwest of Beckville.

Louisiana Drilling Operations

The Louisiana-Arkansas Pipe Line Co. is rigging up for a test on No. 1 Gayoso Co., Inc., Section 14-16-10, Bienville Parish, in the Lake Bisteneau gas area. In the northern part of Bossier Parish, near Plain Dealing, the Flint River Oil Co. is drilling in sandy shale at 2,530 feet on its No. 1 De Moss, Section 22-22-13. Dr. W. N. Hankins is reported as arranging to core in the Nacatoch formation at 675 feet on his No. 1 Newell, Section 12-19-11. This well is located about 2 miles northeast of the Bellevue shallow field where production is found in the Nacatoch at 400 feet. D. L. Perkins is rigging up on his No. 1 Ardis & Co., Section 13-15-11, in the Elm Grove area of Bossier, and has made location for No. 1 Glover and others, Section 23-15-11.

In Caddo Parish, the Pelican Natural Gas Co. has encountered tough formations in its No. 1 Cooper, Section 29-18-14, and progress has been slow for several hundred feet. The test is drilling at 2,898 feet, the heavy 5-inch drill stem will be substituted to make more rapid progress on the test which will be carried to the Trinity formation, 5,000 feet or more unless pay is encountered at a lesser depth. This test is being watched with close interest, since it is a rank wildcat about 6 miles from the city limits of Shreveport and a few miles off an air line to the old Caddo and Pine Island Fields. The Shreveport Oil Corp. has drilled plug at 2,135 feet on its No. 2-B Muslow, Section 32-21-15, Pine Island Field in Caddo Parish, and is arranging to bail the well in. United Gas Public Service Co. began another test to the Trinity gas sand in the Rhodessa district, having set 12½-inch casing at 471 feet on its No. 1 Smith, Section 33-23-16. The same company, in Concordia Parish, is arranging to test No. 1 Hughes, Section 49-8-10, at 1,482 feet.

The Palmer Corp. has set 6-inch casing at 2,300 feet on its No. 1 Clement, Section 10-16-6, Richland Parish, and Southern Carbon Co. has set 8-inch subsurface casing at 933 feet with 12-inch surface at 177 feet in its No. 2 Rosengrant & Ducomb, Section 19-17-6. The same company is carrying along its No. 3 Rosengrant & Ducomb, Section 30-17-6, having set 12-inch surface casing at 178 feet and 8-inch subsurface at 915 feet. The United Gas Public Service, after testing dry from 2,479-2,581 feet on its No. 4 Earle, Section 1-16-5, plugged back to 2,465 feet and will drill plug for a test at this depth.

Zwolle Field Activities

The Zwolle Field, Sabine Parish, failed to register a completion this week, although three tests have varying amounts of oil in the hole and are rigging up to pump. Twenty rigs are running in this area, most of them in the recently proven far eastern extension in Section 1-7-11. A wildcat 8 miles north and west of the proven Zwolle Field has created a riffle of interest during the past few days. J. J. Keen, trustee (was Jean Longaria), is arranging to set 8-inch casing in his No. 1 Belton, Section 31-9-13, after a core showed oil at 1,605 feet. The Zwolle marl was topped in the well at 1,589 feet and this would indicate that it is checking about 200 feet higher than other tests in this vicinity with encouraging prospects for a producer. In the proven area, Pelican Natural Gas Co.'s No. 9 Louisiana Long Leaf Lumber Co., Section 3-7-11, disappointed when it tested dry at 2,363 feet. The hole is being deepened to 2,600 feet. The Jordan Drilling Co., which completed a good well a few weeks ago, has set 6-inch casing at 2,350 feet in its No. 2 Louisiana Long Leaf Lumber Co. in the same section as the Pelican test. W. M. Coates has also set 6-inch and is ready to drill in his No. 4-A Sabine Lumber Co., Section 1-7-12.

East Texas Deep Test

The deep test drilling for gas in Panola County, East Texas, is being followed with interest. The Texas Company's No. 12 G. W. Brumble, John Womack Survey, hit the gas sand at 4,742 feet, but a test produced only 1,000,000 feet of gas and arrangements are being made to deepen with the expectancy of increasing the flow. The Arkansas-Louisiana Pipe Line Co. is rigging up No. 14 Werner, Ben Jorden Survey, after completing a good gasser on this lease two weeks ago which gauged over 21,000,000 feet from a total depth of 4,727 feet. Another deep test in this field, United Production Co.'s No. 10 Werner, Jorden Survey, is drilling in lime at 3,055 feet. In Arkansas, the Lion Oil Refining Co. will make a deep test of its No. 9-A G. P. Hays, Section 4-16-15, in the Smackover Field. The well is reported drilling in red beds at 3,516 feet.

Followers of Mississippi developments were disappointed when the Gulf Refining Co. temporarily abandoned its No. 1 Box, Section 11-2-15, in Clark County at 4,515 feet. A ray of hope still exists for deep production in this State and at the present, the Ohio Oil Co.'s No. 1 Cantrell, Section 16-15-5, Clark County, will be the test watched for these results.

Daily Average Runs

The Zwolle Field dropped off 640 bbls. in daily average runs during the week, which together with small decreases in the other fields, caused a net decrease of 980 bbls. daily. Daily average runs for the several pools were:

NORTH LOUISIANA	
Caddo, light	7,110
Caddo, heavy	2,745
Homer	3,240
Haynesville	5,710
DeSoto-Red River	2,675
Elm Grove	515
Bellevue	580
Cotton Valley	1,860
Urania	4,470
Pleasant Hill	420
Sarepta-Carterville	1,160
Zwolle	7,870
Holly	535
Total North Louisiana	38,890
Total previous week	39,775
Decrease	885
ARKANSAS	
El Dorado	3,620
Smackover, light	4,235
Smackover, heavy	31,540
Stephens	870
Nevada	995
Lisbon	720
Champagnolle	2,980
Bradley	50
Urbana	1,650
Total Arkansas	46,660
Total previous week	46,755
Decrease	95
Total both states	85,550
Total previous week	86,530
Decrease	980

LOUISIANA-ARKANSAS PROVEN AREAS

NORTH LOUISIANA
BOSSIER PARISH

Company, farm and location—	Remarks:
H. I. Morgan's No. 13-A Kendrick, 669 ft. E, 330 ft. S, NW cor. SE SE, Sec. 22-19-11	Killing well with D.S. in hole.

CADDO PARISH—GREENWOOD

Calatex O. & G. Co.'s No. 1 Edgar, 1,460 ft. S, 1,900 ft. E, NW cor., Sec. 17-16-16	Temporarily abd.
Calatex O. & G. Co.'s No. 1 McAnn-Alfred, 1,310 ft. S, 970 ft. E, NW cor., Sec. 17-16-16	Location temp. abd.

CADDO PARISH—OIL CITY

Trio Corp.'s No. 1 Levee Board, 212 ft. S, 500 ft. E, NW cor., Sec. 17-20-15	1,220 ft. oil in hole 2,265 ft; W. O.S.R.

CADDO PARISH—PINE ISLAND

Haynes Bros.' No. 2 Spell, 956 ft. W, 200 ft. N, SE cor. SE, Sec. 15-21-15	S.D. 3,962 ft.
J. T. McCormick's No. 1 C. B. Christian, 330 ft. S, 300 ft. W, NE cor. SW, Sec. 27-21-15	S.D. 1,335 ft.
Shreveport Oil Corp.'s No. 9-B Muslow, 1,000 ft. S, 300 ft. E, NW cor., Sec. 32-21-15	Drlg. plug 2,125 ft.
Simplex Oil Co.'s No. 1 Youree-Glassell, 500 ft. N and E, C, Sec. 13-20-15	Set 10-in. 150 ft; S.D.

MOREHOUSE PARISH

Bahan & Bahan's No. 4 Feazel, 900 ft. W, 330 ft. S, NE cor., Sec. 2-20-4	Location.

OUACHITA PARISH

Jordan Drlg. Co.'s No. 7 Cole, 265 ft. S, 1,459 ft. W, NE cor., Sec. 49, in Sec. 50-18-4	Location.
United Carbon Co.'s No. 6 Spade, 1,180 ft. S, 140 ft. E, NW cor., Sec. 27-19-4	Location.

RICHLAND PARISH

Hope Prod. Co.'s No. 3 Noble, 2,049 ft. S, 2,607 ft. E, NW cor., Sec. 1-15-5e	Began May 15; set 13-in. 131 ft.

(Continued on Page 92)

WILDCAT OPERATIONS IN LOUISIANA-ARKANSAS

(Rotary operations unless otherwise designated)

NORTH LOUISIANA
BIENVILLE PARISH

Company, farm and location—	Remarks:
Ark.-La. P. L. Co.'s No. 1 Giddens, 660 ft. N, 660 ft. E, SW cor. NW SW Sec. 14-16-10	Rigging up.
Coyle Bros.' No. 1 Lawhorn, 300 ft. N, 300 ft. E, SW cor. SE NE, Sec. 15-16-8	Junked and abd. 2,854 ft.

BOSSIER PARISH

Andrews & Davlin's No. 1 Nattin, 100 ft. N, 250 ft. W, C, Sec. 15-22-14	S.D. 2,950 ft.
Flint River Oil Co.'s No. 1 C. L. DeMoss, 200 ft. S and E, NW cor. SE NW, Sec. 22-22-13	Drlg. sandy shale 2,530 ft.
Dr. W. N. Hankins' No. 1 Newell, 300 ft. S and W, NE cor., Sec. 12-19-11	Drlg. 675 ft.
D. L. Perkins' No. 1 Ardis & Co., 1,127 ft. N, 198 ft. E, SW cor., Sec. 13-15-11	Rigging up.
D. L. Perkins' No. 1 J. W. Glover et al, 560 ft. N and W, SE cor. NE, Sec. 23-15-11	Location.
Rombaugh et al's No. 1 Allison, SW SE, Sec. 16-19-13	S.D. 1,600 ft.

CADDO PARISH

Pelican Nat. Gas Co.'s No. 1 Cooper et al, 1,810 ft. E, 1,064 ft. S, NW cor., Sec. 29-18-14	Drlg. 2,858 ft.
United Gas Public Service Co.'s No. 1 M. K. Smith, 660 ft. S, 2,640 ft. W, NE cor., Sec. 33-23-16	Began May 17; set 12½-in. 471 ft.

CALDWELL PARISH

Carter Bell's No. 1 Taylor, 150 ft. S, 150 ft. E, NW cor. NE SE, Sec. 17-14-4	Derrick.
Hudson et al's No. 1 Burton, Sec. 35-12-2e	Coring 2,931 ft.

CATAHOULA PARISH

National Drlg. Co.'s No. 1 Marsh McMiller, 70 ft. N, 100 ft. W, C, Sec. 26-9-6	T.A. 3,097 ft.

(Continued on Page 91)

The BRIDGEPORT Shopper's PAGE

This page offers you many real money-saving bargains—in both new and dependable used equipment. Read it carefully—you may find here just the thing you need most. This is YOUR SHOPPER'S PAGE—a real opportunity to hold costs to the minimum and pile up more dollars in your bank account. Read our "Want Section" too—you may have something you no longer need, that we will pay you cash for, another Bridgeport service to help you cut costs during these times.

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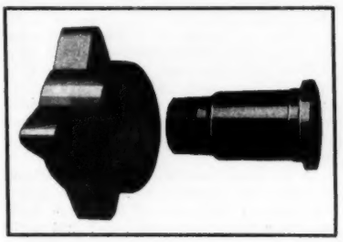

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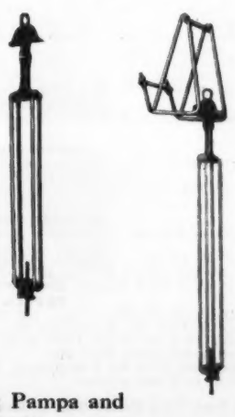

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Gassers Draw Interest to Saxet Field

Numerous Sands in That General Area Encourage Operators. Serpentine Production Found in Bastrop County

By B. D. Stevenson
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., May 25.—Houston Oil Co.'s No. 1 Lawrence in the Saxet Field in Nueces County will not be closed in for some days. It was reported briefly in last week's issue of The Oil and Gas Journal as having broken loose and run wild. The drill stem was blown out of the hole and the derrick wrecked.

There has been so much rain that the condition of the ground prevented shutting the well in.

This well was carried first as the R. A. Thompson and others' No. 2 Lawrence-Harrell and was completed August 11, 1930, at 1,659 feet for 20,000,000 feet of gas. It was 1,500 feet northeast of No. 1 which blew out and ran wild at that depth and cratered and was lost. The Houston Oil Co. bought the property and had started to deepen the hole when it blew out with the drill at about 3,000 feet.

It is quite possible that it is blowing out from the sand at 1,659 feet and also from the 2,400-foot sand. Kepley's No. 1 Donigan, just a mile east of it, came in at 2,437 feet for 25,000,000 feet of gas. The map on Page 57 of The Oil and Gas Journal of May 14 shows the wild well as the one on the west of the two gas wells inclosed in one circle in the middle of the map.

During the past week the Gulf Coast Oil Co.'s No. 1 Harrell, located a mile north and a little west of the wild gasser, has had some encouraging looking sands, one at 3,173 feet and one at 3,773 feet, which are not producing in any of the wells of the field, but the test is being drilled to pick up the 4,100-foot sand and at latest reports was a little below 4,000 feet. Before the close of the week it should be ready to test if it finds the sand as expected.

Cores Two Sands

L. L. Smith's No. 1 Hunter cored a sand at 3,185 feet and another at 3,416 feet. It is located about a half mile north of the wild gasser. The sand at 3,185 feet is no doubt the same as that at 3,173 feet in the Gulf Coast Oil Co.'s No. 1 Harrell. The one at 3,416 feet is not producing in any well in the field. The L. L. Smith test will also continue to the 4,100-foot sand to protect the lease from other wells producing around it at that horison.

This multiplicity of sands in the Saxet Field, matching the same condition in the Refugio Field, 40 miles to the northeast, is attracting a lot of thought on the part of oil men generally. Midway between the Saxet Field on the south and the Refugio Field on the north, Aransas Oil Corp. recently brought in a gas well in wildcat territory at 3,663 feet. In that immediate vicinity the Houston Gulf Gas Co. drilled a number of tests a few years ago and picked up several sands with good showings and it may later prove that these locations were edge propositions and a big pool of several sands may be discovered in that territory with conditions much the same as in Refugio and Saxet-White Point. The showings in the various sands and at various depths would seem to indicate that there are accumulations of some sort in that territory.

T. B. Slick estate's No. 1 McFadden in southern Victoria County, 25 miles northeast of Refugio and on a line with the other pools just mentioned and with much the same general coast geological conditions, and the Kingsville Field, 25 miles south of the Saxet Field with several sands, makes this group of counties along the coast look interesting for wildcatting.

Laredo District

The most interesting test in the Laredo district is S. J. Carpenter's (Gus Pape) No. 1 Juan Benavides, mentioned in last week's report, located a mile east of production in the O'Hern-Seacord Pool in Duval County, showing oil at 1,669 feet. It was being bailed as this was being written and too early to know what it will do. It is 100 feet or more shallower than production in the O'Hern-Seacord and Cole Fields to the west. It is 4 feet into the sand. If it gets production it will be the second most easterly of any producing fields in the district, the Driscoll Pool being 10 miles east.

Folds and structures in the Laredo territory, as has often been mentioned, run north and south, so that unless a test is north or south of an old pool it is more reasonable to suppose that it opens a new pool than that it is an extension.

Disappointment was the reward of the Humble Oil & Refining Co. in a test of No. 50 Kohler in Survey 164 of Duval County in the Kohler Field at 6,087 feet when it tested salt water. The company set 9⅝-inch casing at 6,020 feet with extra precautions to take care of high pressure. A big concrete anchor was placed at the top. It is the deepest test drilled in the Laredo district. It had a little oil and salt water at 1,887 feet and is on the west edge and pretty well to the north end of the Kohler Field where oil and gas is had at about 1,800 feet in a string of wells. Since then the only other sand reported is this one, topped at 6,020 feet. Drilling has been resumed and last depth reported is 6,100 feet.

The only other test in Laredo district at this time which is below any of the producing sands is the Magnolia Petroleum Co.'s No. 1 Y. V. Cuellar in Block 92 of Survey 575 in northwestern Jim Hogg County and a couple of miles east of the southern end of the Henne-Winch-Fariss Pool. It is drilling at 4,212 feet and no sands have been reported thus far.

E. C. Brogan abandoned at 2,000 feet his No. 1 Montemayor, Block 11, Survey 64, on the east edge of the Escobas or Jennings-Muckelroy Pool in Zapata County. It had a sand at 1,492-98 feet that looked good till tested but made salt water. This sand would correspond to one producing elsewhere though the main production of that pool is at 1,300 feet.

Brogan's No. 1 Montemayor was 150 feet from the north and west lines of Block 11 and he has made location for the No. 2, 450 feet from the north and 150 feet from the west line of the same block, which would indicate that the operator was convinced that the No. 1 was only slightly out of line for production.

New Serpentine Pool

Schimmel & Batts have made location for another test in Bastrop County. Their No. 1 Williams, carried in some reports as Texas Petroleum Co.'s No. 1 Williams, at 1,997 feet is about a 6-bbl. oil well in serpentine, 2 miles south of the Yoast Pool, which is also producing from serpentine and in southwestern Bastrop County. In other serpentine pools in Southwest Texas production has varied greatly, there being dry holes in the middle of a pool where the serpentine was found tight and nonporous and small wells offsetting big ones. The new location for Schimmel & Batts is No. 1 J. E. Ferguson, 160 feet from the northwest line and 1,600 feet from the northeast line of the Ferguson tract in the J. Doyle Survey.

Generally along the Balcones fault things have been quiet. In western Hays County, Jones & Erwin's No. 1 Byler is drilling at 900 feet. It is thought to have topped the Pennsylvanian at about 830 feet. It was tied up and delayed for weeks trying to get 8-inch on the bottom of the hole at 830 feet to protect the hole and finally succeeded only last week.

In western Guadalupe County, McGarrity's No. 1 Wesch, also a test aimed at the Pennsylvanian, is down 800 feet after topping the Edwards at 540 feet. The top of the Edwards carried sulphur water and there is no expectation of production until it gets past the Edwards. The operators believe the log is running high compared with tests east and west of it.

Pettus District

United Production Co.'s No. 38 Ray, which tested salt water late last week at 3,979 feet and stopped the further extension east of the Pettus Pool, was a disappointment but the company will continue to drill No. 37, which is more than a mile east and a half mile south of the No. 38. No. 11 Ray, located 1,500 feet southeast of No. 37, made a gas well but the hole was lost. There is production a mile northeast of No. 37 at 4,060 feet compared with 3,975 feet in the Pettus

(Continued on Page 95)

SOUTHWEST TEXAS PROVEN AREAS

COOKSEY POOL—BEXAR COUNTY

Company, farm and location—	Remarks:
Pean Oil Co.-Cun Oil Co.'s No. 1 Pollok, 1,100 ft. SW of No. 1 Cooksey in John W. Raill Sur.	Set csg. 1,370 ft.

DOBROWOLSKI POOL—BEXAR COUNTY

Boling & Michael's No. 1 Adams, Miguel Gortaris Sur.	T. D. 700 ft.; comp.; small well.
Gatlin Oil Co.'s No. 7 I. A. Beck, 150 ft. SW line, 1,351 ft. SE line of tract, Montes Sur.	Rigging up.
Patton & Yocum's No. 1 T. Strunk, 1,351 ft. from SE line, 150 ft. from NE line of tract	T. D. 727 ft.; set csg.
W. S. Rogers et al's No. 1 L. Donnop, Juan Montes Sur.	T. D. 550 ft.; drlg.
A. J. Swearingen's No. 6 Sandemer, 600 ft. S of No. 1, M. Manchaca Sur.	T. D. 725 ft.; comp. 10 bbls.
A. J. Swearingen's No. 7 Sandemer, 300 ft. S of No. 6, M. Manchaca Sur.	T. D. 717 ft.; comp. 8 bbls.
Swearingen et al's No. 10 Sandemer	T. D. 700 ft.; comp. 6 bbls.

BRUNER POOL—CALDWELL COUNTY

Joe Bruner's No. 1 Malone, A. Floyd Sur.	T. D. 105 ft.; set 91 ft. surface csg.; waiting on cement.

EDDINGTON POOL—FALLS COUNTY

Eddington et al's No. 3 Llewellyn, George Allen Sur.	T. D. 1,070 ft.; fishing.

DARST CREEK FIELD—GUADALUPE COUNTY

Magnolia Pet. Co.'s No. 8 M. T. Klein, 300 ft. SE of No. 1	T. D. 1,600 ft.; drlg.

CHAPMAN POOL—WILLIAMSON COUNTY

Chapman et al's No. 2 Lawrence, S. Miller Sur.	T. D. 1,916 ft.; set 6⅝-in. csg.; waiting on cement.
Ertel et al's No. 9 J. C. Abbott, 842 ft. from W and 150 ft. from S line of farm in S. Miller Sur.	T. D. 1,644 ft.; comp. 40 bbls.
Vitex Oil Co.'s No. 8 Kilgore, Simon Miller Sur.	T. D. 1,735 ft.; waiting on cement.

PETTUS AREA—BEE COUNTY

J. M. Davis et al's No. 1 Ray, 330 ft. from N and E lines of John W. Williamson Sur.	Spudded in.
J. L. Mauldin's No. 1 fee, 1,300 ft. N of S line, 150 ft. E of Medio Creek, Kerr Sur.	T. D. 3,862 ft.; standing.
Gulf Coast Oil Co.'s No. 2 McKinney, 2,400 ft. to E and 150 ft. to S line of tract	T. D. 2,730 ft.; set csg; drlg. plug.
United Prod. Co.'s No. 32 Ray, G. Habermacher Sur.	T. D. 3,925 ft.; abnd.

(Continued on Page 90)

WILDCAT OPERATIONS IN SOUTHWEST TEXAS

ATASCOSA COUNTY

Company, farm and location—	Remarks:
Tom Draper's No. 1 A. W. Schwarz, 185 ft. E of center of W line	T. D. 728 ft.; drlg.
Glen Mathis, trustee's No. 1 Martin in J. Arranoga	Rigging up.
Pacific Oil & Gas Co.'s No. 1 Harris, G. Van Norman Sur.	T. D. 852 ft.; abnd. dry.

BLANCO COUNTY

Hardy-Sitton's No. 1 McMillan	T. D. 796 ft.; drlg.
Liles-Adams et al's No. 1 Stanford, 150 ft. to S line, 1,120 ft. to E line of James Stanford's No. 155	T. D. 970 ft.; abnd. dry.
McCleary et al's No. 1 Schenling, 900 ft. to SE line, 600 ft. to S line of J. A. Rouse No. 118 Sur., 4 miles SW from Blanco City	T. D. 574 ft.; shut down.
J. R. Meek's No. 1 Walker, 360 rds. from W line, 482 rds. from S line of 375-ac. tract in Sur. No. 32	T. D. 1,047 ft.; drlg.
C. Rosenfield's No. 1 Hohenberger, 800 ft. to W line, 1,260 ft. to N line, Sur. No. 94	T. D. 712 ft.; shut down.

BASTROP COUNTY

Schimmel & Batts' No. 1 J. E. Ferguson, 160 ft. from NW line, 1,600 ft. from NE line of tract in J. Doyle Sur.	Location.
Smith & Barnes' No. 1 Marberger, 450 ft. W line, 1,360 ft. S line of tract in King & Millet Sur.	Spudded in.
Texas Petroleum Products Co.'s No. 1 J. C. Williams, 2,200 ft. E line, 180 ft. N line of farm, James Doyle Sur.	T. D. 1,997 ft.; comp. 6 bbls.

BELL COUNTY

Hartman et al's No. 1 M. E. Reed, Nancy Roberts Sur.	T. D. 907 ft.; showing oil; shut down.
Mildon Oil Co.'s No. 1 J. K. Edds, Maxiano Moreno Sur.	T. D. 519 ft.; drlg. shale.
C. O. Alford's No. 1 A. L. Keifer, 150 ft. from S and W lines of tract in Woodford Sur.	Location.
Vilas Oil Co.'s No. 1 B. F. Whittington, 9 miles E of Holland	Moving in rig.

BROOKS COUNTY

Ike Howeth's No. 1 Singer, 400 ft. E of Humble's No. 1 Singer	T. D. 860 ft.; drlg.
The Texas Company's No. 1 Allen, San Antonita grant	T. D. 1,410 ft.; drlg.

(Continued on Page 90)

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Important Find in Fort Bend County

Proving of New Salt Dome Prospect Opens Field That May Be Prolific. Heavy Gas Showing in Victoria County

By Neil Williams
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., May 25.—What is looked upon by coastal operators as one of the most important discoveries on the Gulf in many months is the wildcat producer completed by Cullen & West, with Gulf Production Co. as a half owner, in the J. Rabb Survey, eastern Fort Bend County. The well, No. 1 H. P. Lockwood, proves up another of the many salt dome prospects and opens a field which has earmarks of becoming one of the most prolific of the new coastal pools.

This wildcat producer was completed May 21 flowing an estimated 350 to 400 bbls. daily on a quarter-inch choke. Early estimates placed the well as good for 2,000 to 3,000 bbls. daily on a half-inch choke but the first day's flow was less than 400 bbls., and as this is written the well was flowing at the rate of 20 bbls. hourly on the quarter-inch choke.

Location of the well is on a salt dome prospect which passes under numerous designations, chiefly as Clear Lake, Rabbs Ridge or Gubbels Dome. It is on the north flank of what is known as Rabbs Ridge, a pronounced elevation through the Brazos River bottoms. Its footage location is 475 varas from the west line of the east half of the John Rabb Survey and 1,245 feet from the north line.

Production is from a sand at a total depth of 3,087 feet. In this one 30-foot joint of 6⅝-inch screen was set on bottom with 12 joints of 6⅝-inch liner and 4¾-inch liner on top. Washed, the well started flowing oil between the liner and casing and was closed in for a short time. Opened on a half-inch choke it started flowing by heads and then was put on the quarter-inch choke.

Grade A Crude

The oil is good Grade A coastal crude, of which there is comparatively little being produced by any of the newer fields and for which at present there is a strong demand as the greater part of coastal production now is Grade B, which is of considerably less value for lubricating oil content than Grade A. Gravity of the oil, corrected for temperature, is 24.5 degrees.

The well originally showed a pressure of 525 pounds on the casing and 800 pounds on the liner but now has settled to around 380 pounds on casing and 350 pounds on liner.

Two 1,000-bbl. tanks have been set up on the lease for storage but Gulf Pipe Line Co. already has started laying a line from the well to a connection with its main line from Big Creek to Blue Ridge, which passes within 5½ miles of the well. This line will be 6-inch. Sinclair Pipe Line Co. has a line within 2,000 feet of the well but Gulf Production Co. holds a 50 per cent interest in the well and will run the oil.

Clear Lake, the most commonly accepted designation for the field because of a lake by that name in the center of what is believed to be the dome, has been considered a likely prospect for many years. The Cullen & West well, however, was drilled as a result of geophysical exploration and findings by the Gulf Production Co., which shot the area and took up the acreage along with Cullen & West and other companies and operators following its abandonment by Humble Oil & Refining Co. and the old Marland Oil Co. Early geophysical exploration had indicated the dome as being several miles to the west of the present location.

Previous Tests

*The Cullen & West well is the first test drilled by these operators or by the Gulf Production Co. A total of 11 tests had been drilled around the area, all except four being shallow and five of those being geological tests put down by Marland Oil Co. and Humble Oil & Refining Co. in an attempt to outline and prove the area. None of the tests was closer than 10,000 feet to the present well. In addition to the five geological tests, Marland drilled one deep test, its No. 1 Lockwood, located approximately 14,000 feet of Cullen & West's well and abandoned in December, 1925. It was drilled to a total depth of 4,556 feet without the slightest showing or indication of a dome, resulting in abandonment of the prospect. The other three deep tests, the deepest being 3,862 feet, two being drilled by Neilan Oil & Refining Co. and one by Galveston Exploration Co., were located from 13,000 to 16,000 feet northwest of the producer.

Humble Oil & Refining Co., The Texas Company, Shell Petroleum Corp. and others, in addition to Gulf and Cullen & West, own scattered tracts in the Clear Lake area. However, if the present well is located on top the dome, Gulf and Cullen & West own virtually all the favorable acreage of the field, most of which is held jointly. In going into the area, these interests originally obtained separate leases but later these were pooled on a 50-50 basis with both sharing the cost of development.

Although the existence of a dome has not been proved, if there is a dome it is believed to be very deeply seated, more so than the Sugarland (DeWalt) Dome, some 5 miles to the north. The latter dome is around 3,600 feet and is producing from an overlying sand from 3,400 feet to 3,700 feet. It is looked upon as being probably the most perfect dome on the coast and being owned and operated by one company, Humble Oil & Refining Co., it has been developed and produced on a conservative and efficient basis.

May Equal Sugarland

The Clear Lake Dome has been compared with Sugarland in a general way and it is expected it may prove as prolific, if not more so. Of particular interest is the comparative shallowness of the sand at 3,087 feet, which is still in the Miocene, while Sugarland is in the Oligocene. Being in the Miocene, it has possibilities of lower production. The Miocene at Sugarland was unproductive.

Although not definitely determined, location for the second test will be made by Cullen & West early this week and probably will be in the tract to the west of the producer.

Clear Lake is nestled in the midst of a cluster of fields and dome prospects. Approximately 5 miles to the north is Sugarland; 10 miles to the west is Big Creek; 10 miles to the south is Nash, and about 10 miles to the northeast is Blue Ridge; while around and among these are a number of geophysical prospects. Clear Lake is the twenty-third geophysical prospect on the coast to prove commercially productive of oil.

Victoria County Prospect

Although somewhat overshadowed by the opening of a new field in the salt dome district, of considerable interest during the week was a drill stem test made of a sand at 3,502-12 feet in T. B. Slick estate's No. 1 McFaddin, J. Vairan Survey, Victoria County, in the lower Gulf Coast district. The test showed heavily of gas, running up a pressure of 650 pounds on a three-eighths-inch choke. Casing has been run to test.

Whether this will open an entirely new field in that part of Victoria County, known as the Bloomington-Marianna district, or a 3-mile extension of gas production remains to be seen. The test is approximately 3 miles to the north of United Production Corp.'s two wildcat gas wells, in the Traviesa Survey, which were drilled and completed late in 1930 and early in 1931 by Lion Oil & Refining Co. The latter were large gas wells in a 3,700-foot horizon.

If a separate field, it will mark the third in that area as The Texas Company has a wildcat gas well (shut in), in the C. M. B. Hoyd Survey, 4 miles to the west of the United Gas Co. wells. That well, No. 2 McFaddin, is at a total depth of 2,025 feet although the sand is a little above that. A deep dry hole between The Texas Company and the United Production Corp.'s wells separates them.

That this may turn out to be one large district is indicated in the similarity of its development to other Coast fields, chiefly at Refugio, some 30 miles down the coast, where early operations resulted in spotted production scattered over a large territory. This frequently has been referred to as a second Refugio. The latter field, as well as others down the coast line, started as dry gassers under spotted conditions.

Daily Average Production

Daily average production of Coastal fields for the week ended May 23 was:

TEXAS COAST

Allen	8
Barbers Hill	27,797
Batson	993
Big Creek	2,789
Blue Ridge	1,235
Brenham	71
Boling	864
Clay Creek	2,621
Clear Lake*	129
Damon Mound	1,293
DeWalt	11,576
Esperson	2,507
Fannett	485
Goose Creek	4,389
Hankamer	2,825
High Island	375
Hull	6,669
Humble	10,060
Lost Lake	245
Markham	184
Moss Bluff	348
Mykawa	221
Nash	213
North Dayton	613
Orange	1,841
Orchard	999
Pierce Junction	10,213
Port Neches	1,370
Raccoon Bend	8,232
Refugio	30,702
Rockland	2
Saratoga	1,131
Sour Lake	1,962
South Liberty	2,076
Spindletop	9,407
West Columbia	4,139
Total Texas Coast	150,367
Week ended May 16	151,075
Decrease	708

*Discovery well completed May 21, 1931.

LOUISIANA COAST

Anse La Butte	71
Bayou Blue	65
Bayou Bouillon	111
Black Bayou	1,525
Edgerly	356
Jennings	669
Hackberry	2,404
Lake Barre	2,107
Lake Pelto	106
Leesville	312
Lockport	7,343
Fort Barre	1,687
Sorrento	375
Starks	770
Sulphur	4,412
Sweet Lake	1,909
Vinton	5,337
White Castle	1,834
Total Louisiana Coast	31,393
Week ended May 16	31,182
Increase	211
Total Gulf Coast	181,760
Week ended May 16	182,257
Decrease	497

Refugio Gasoline Wells Shut In

The most important development at Refugio was the action of operators in shutting in of all "gasoline" wells. Around 20 such wells, all in the deep horizons, are affected by the regulations

(Continued on Page 96)

GULF COAST FIELDS AND WILDCATS

Week Ended May 23

All Rotary

BARBERS HILL—CHAMBERS COUNTY

Gulf Prod. Co.'s No. 1 Wilburn (D.D.), Henry Griffith League, 50 ft. S of C of N line of tract ..... Abandoned 5,290 ft.

Gulf Production Co.'s No. 4 Wilburn (D.D.), Henry Griffith League, 1,400 ft. W line and 50 ft. S line of lease ..... To deepen 5,239 ft.

Humphreys Corp.'s No. 5 E. H. Winfree, W. D. Smith Sur., 854 ft. from S line and 50 ft. from W line ..... Drlg. lime 5,011 ft.

Humphreys Corp.'s No. 6 E. H. Winfree, W. D. Smith Sur., 50 ft. from N line and 50 ft. from W line of tract ..... Drlg. sandy lime 3,441 ft.

Humphreys Corp.'s No. 1 Anna Davis, Henry Griffith League, 475 ft. from N line and 71 ft. from E line of Strip 6 ..... Drlg. sand, shale and lime 4,071 ft.

Humphreys Corp.'s No. 2 T. S. Fitzgerald, Henry Griffith League, 300 ft. from N line, 65 ft. from E line of tract ..... Drlg. salt 2,835 ft.; top of salt 1,413 ft.

Humphreys Corp.'s No. 1 Fitzgerald-Meadows, Henry Griffith League, 50 ft. S and 100 ft. E of NW cor. of tract ..... Drlg. 200 ft.

Mills Bennett Prod. Co.'s No. 1 Gulf-Fisher (workover), William Bloodgood Sur., 50 ft. from SW line and 250 ft. from SE line tract ..... Total dpth 5,344 ft.; plugged to 4,635 ft.; milled out and sidetracking in shale 4,541 ft.

Mills Bennett Prod. Co.'s No. 4 Gulf-Fisher, William Bloodgood Sur., 300 ft. from W line, 80 ft. from N line tract ..... Drlg. gypsum 1,308 ft.

Rio Bravo Oil Co.'s No. 2 Fisher, west flank ..... Coring sand and shale showing oil 5,272 ft.

Sinclair Oil & Gas Co.'s No. 3 Smith, W. D. Smith Sur., 50 ft. out of S cor. of tract ..... Lime rock 3,708 ft.; drill stem stuck.

Sun Oil Co.'s No. 2 Smith, W. D. Smith Sur., 75 ft. from W line, 50 ft. from N line of tract ..... Rock 4,085 ft.; drill stem stuck.

Sun Oil Co.'s No. 3 Smith, W. D. Smith Sur., 50 ft. from S line, east offset Yount Lee Oil Co.'s No. 3 Winfree ..... Drlg. rock 3,796 ft.

Sun Oil Co.'s No. 2 Winfree, W. D. Smith Sur., 450 ft. SE along SW line from NW cor. of tract and 50 ft. NE at right angles ..... Cmtd. cavity 2,855 ft.

(Continued on Page 93)

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Standard Seamless Tubular Goods
Rotary Drilling Machinery
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Two Deep Tests for Greasewood Dome

Wirt Franklin Contracts to Drill to 7,500 Feet "Unless." Increased Activity Is Being Shown in Idaho

By Tolbert R. Ingram
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., May 25.—The allowable outlet of the Hobbs Pool will remain at 37,040 bbls. daily for the last half of May. The new leasing act on state lands, which substitutes a five-year renewal right for expiring leases instead of a preference right based on figures established by competitive bidding, will go into effect June 12. There is considerable talk of local refinery deals at Artesia as a solution for the lack of market for crude in that district. There were no completions in New Mexico and drilling is at a minimum.

Wirt Franklin, of Oklahoma, with his brother, will drill two deep wells in the Greasewood district in Colorado under an agreement with Robert Miller Taylor, trustee, for the Aztec Corp. Three new locations were made in the Berthoud district. The Mountain Fuel Supply Co. completed its No. 2 State on the Hiawatha Dome for 17,500,000 feet of gas.

In Wyoming, the Midwest Refining Co.'s Midway test is plugging back after exploring all horizons down to the red beds. Montana refineries are offering a premium for Osage crude. The Petroleum Exploration Co.'s Buck Springs test in Carbon County encountered sulphur water and is being abandoned.

Four locations were made in the Cut Bank Field in northern Montana to develop gas for the Montana Power Co.'s line to Butte and Helena. There were no completions reported in Montana.

Idaho is showing an increased activity as several wells get under way.

NEW MEXICO

Due to the fact that there is no change in pipe line connections or pipe line nominations in the Hobbs Pool, Umpire C. G. Staley has advised the operators that the proration sheet in effect for the first half of May will be in effect for the last half of the month without change. The allowable outlet will remain at 37,040 bbls. daily for the period.

The new leasing act, known as House Bill No. 126, which was passed by both houses of the New Mexico legislature and signed by the governor on March 12, will go into effect on June 12 and the state land commissioner at Santa Fe has completed the rules and regulations for the new procedure. The new law does away with the preference right to renewal of an expiring lease by competitive bidding and substitutes a blanket renewal right. Under the old law the holder of a lease could obtain a renewal only by accepting the rentals established by competitive bidding. The new law gives him the privilege of converting his present lease for the unexpired period into a new lease under Form 44, which goes into effect on June 12, and at the expiration of the new lease he has the right to a five-year extension at double the present rentals.

Lea County

Only three wells in Lea County reported any progress this week. Leonard & Levers' No. 1 Justis, C SE NW, Section 19-25-37, east side of the Jal area, is drilling at 2,640 feet. The 8-inch was cemented at 2,615 feet. It is running about 50 feet lower than the Continental Oil Co.'s No. 1 Sholes, two-thirds of a mile to the west, which was completed as a gasser at 3,030 feet in 1929. Culberson & Conrad's No. 1 State, C NE, Section 22-18-34, Caprock area, is standing at 204 feet with the 15½-inch cemented on bottom in the red beds. The Midwest Refining Co.'s No. 26 Capps, C SE SW, Section 3-19-38, is drilling at 3,685 feet in anhydrite and lime and had the first oil at 3,230 feet.

Eddy County

The Oil Well Drilling Co.'s No. 1 Baker, SE NE NE, Section 21-21-26, in the Carlsbad area, is bottomed at 965 feet and straightreaming. It had a hole full of sulphur water at 690-700 feet. J. O. Hammond & Sons' No. 1 Gillette, C NW NW, Section 34-18-26, an old well being deepened, is drilling at 912 feet in lime and sand. It had a show of black oil at 828-33 feet and a small show of gas at 885-95 feet.

De Baca County

The Matador Oil Co.'s No. 1, NE SW SW, Section 6-4n-20, Salada Creek, is drilling at 3,100 feet in the red beds.

Chaves County

R. T. Neal and others' No. 1 Russell, SW NW NW, Section 21-14-25, Hagerman district, is shut down for orders at 2,320 feet in lime and shale, and the Warman Oil Trust's No. 1 Seibert, NE, Section 27-13-24, Blackdom district, is shut down for orders at 2,686 feet.

Guadalupe County

The New Mexico Producing & Refining Co.'s No. 1 McMullen, SW cor., Section 24-5n-16, Mesa Leon district, is rigging up cable tools. This formerly was known as the Los Angeles-Hollywood Syndicate.

San Juan County

R. C. Oswell's No. 2, NW, Section 34-30-11, between Aztec and Bloomfield, is drilling at 345 feet. First objective is expected at 1,300 feet. The Continental Oil Co.'s No. 24, SW cor. NW, Section 1-29-19, Rattlesnake Dome, is working with stuck drill pipe at 3,923 feet. Total depth is 4,730 feet. The Kutz Canon Oil & Gas Co.'s No. 1 Day, SW cor., Section 20-28-10, Kutz Canon district, is drilling below 3,155 feet.

COLORADO

Weld County

Two more deep wells for the Greasewood Dome in Weld County in northeastern Colorado were assured this week when contracts were signed between Miller Robert Taylor, acting as trustee for the Aztec Corp., which is in process of organization, and the Capitol Drilling Co. of Oklahoma City, under which operations are to begin by July 1. One contract calls for a well on the Kirchoff Ranch, in the east half of Section 1-6n-61, 3 miles north of the Platte Valley Petroleum Co.'s discovery well which came in at 6,664 feet last October, and the other for a well in Section 16-6n-61, the same distance to the northwest. The last named is a state lease. The Capitol Drilling Co. is composed of Wirt Franklin and Harry Franklin. The exact location of the wells have not yet been announced but will be in the center of forties. The contracts calls for wells to a depth of 7,500 feet unless oil or gas in commercial quantities, granite or other impentrable rock is encountered at a lesser depth. The agreements call for 100 feet, more or less, of 20-inch pipe, 4,500 to 5,500 feet of 9-inch and a hole at the bottom sufficiently large to take the 6⅝-inch.

The Reiter-Foster Oil Co.'s No. 1 Ida Johnson, C NE NW, Section 24-6n-61, an offset on the north to the discovery, a joint operation with the Platte Valley Petroleum Co., is drilling below 3,000 feet and making fast progress. The Hygiene sand in the Pierre shale, the first definite marker in that district, is expected at around 3,400 feet and will be tested. It had a good show of oil and gas in the discovery well.

The Tulsa-Fort Morgan Petroleum Corp. has been formed in Fort Morgan with an authorized capital of $3,000,000. Ralph R. Drennen, secretary of the Fort Morgan chamber of commerce and former secretary of the Platte Valley Petroleum Corp., is president; L. M. Roome, of Tulsa, is vice president; C. H. Mayborn, Fort Morgan, secretary-treasurer; and Frank F. Thompson, vice president of James F. Bennett & Co., of Chicago, and Floyd E. Pendall, of Fort Morgan, additional directors.

Morgan County

The Indian Territory Illuminating Oil Co.'s No. 1 State, C NE NE, Section 16-1n-57, Fort Morgan anticline, is still shut down at 4,090 feet and no announcement has been made as to future plans. Inability to lower two strings of casing which froze delayed operations for several months. The Badger Creek Oil & Gas Co., which has a block of 5,550 acres in the Badger Creek district, is reported to have placed its leases in escrow under an agreement with J. Juhan to begin operations within 90 days, in which event the leases will be turned over to him for development. The company's No. 1 Kent, SW cor., Section 2-2n-57, spudded in the summer of 1928 and was drilled to 750 feet when work was suspended for lack of funds. The hole was placed in good shape two years ago and leases renewed. Recent developments in that area has revived interest in the operation.

Arapahoe County

The MacDeb Drilling Co.'s No. 1 Fitzsimmons, NE, Section 7-4s-66, near Aurora, again sidetracked tools and is drilling at 5,820 feet, 25 feet below the tools which were pushed into the wall but not cemented. It is reported 5 feet in a sand containing considerable lime and which is showing about 2 inches of oil on the top of the water bailed. There is also a little gas showing. It had a good show at 5,735 feet which was cemented off. It is planned to shut down until a string of 4½-inch casing can be run as there is considerable open hole which is giving trouble.

Lincoln County

The Eastern Colorado Oil Co.'s No. 1 State, SE cor. NW, Section 36-14-57, near Hugo, is bottomed at 3,380 feet and straightreaming after pulling the 4¾-inch.

Adams County

Nettie M. Slatt's No. 1 Hills, SE cor., Section 27-3s-64, Watkins district, has been delayed at 3,400 feet by cavey ground, but is making new hole after cleaning out and lowering the 8⅝-inch.

Jefferson County

The Ruby Hill Oil & Gas Co.'s No. 1 Braden, SE cor., Section 24-4s-69, near Denver, is bottomed at 3,905 feet in hard sandstone and drilling intermittently.

Larimer County

The Berthoud district, 3 miles west of the town of that name, is one of the most active operations in the State. The Vogel-Raddatz Corp., of Salt Lake City, which has been successful in the south Florence Pool, obtained a lease on 3½ acres upon which is located what is known as the Red Rock school house. This lease touches Coleman Lake and is intersected by the northeast section corner of Section 21-4n-69. Rig was being moved to location when a deal was made with the Standard Oil Co. of Colorado, which controls offset acreage. The deal provides that Standard company will receive a half interest in the gas which may be developed on the lease and also on a 640-acre tract held by the Vogel-Raddatz interests to the north. In turn.

(Continued on Page 81)

TWO IMPORTANT NEW PRODUCERS FOUND IN SOUTH TURNER VALLEY

By Victor Lauriston
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, May 23.—In the South Turner Valley, two important new producers have been brought in. East Crest Oil Co.'s No. 3, LSD 4, Section 16-19-2w5, got production 392 feet in the lime at 4,843 feet depth. Some trouble was experienced with freezing. A shot of 450 quarts was put in and after the well cleared, a production test gave a steady crude naphtha recovery of 160 bbls. The wet gas flow was estimated between 23,000,000 and 24,000,000 feet. No. 3 offsets No. 2-A in the same LSD; the latter developed a maximum recovery around 450 bbls.

Mayland Oil Co.'s No. 6, Section 17-19-2w5, drilled by Imperial Oil, Ltd., has been given a production test at 4,923 feet, 239 feet in the lime, and is reported to have shown a crude naphtha recovery around 250 bbls. This will make the Mayland Oil Co. the second largest producing company in the Turner Valley, second only to Mercury Oils, Ltd. April deliveries of the Mayland wells averaged 71 bbls. from No. 1, 112 bbls. from No. 2 and 113 bbls. from No. 3. Mayland's No. 4, same section, which has been standing cemented at 2,290 feet, will probably be resumed with the completion of No. 6.

Imperial Drilling

Among the Imperial tests, Merland Oil Co.'s No. 1, Section 27-18-2w5, and farthest south test, is at 5,543 feet, 554 feet in the lime, and running 4¾-inch casing preparatory to a production test. Lowery Petroleums' No. 2, NW, Section 17-19-2w5, which entered the lime at 6,070 feet, corrected depth, is being shot at 6,433 feet. Southwest Petroleums' No. 2, Section 8-19-2w5, is drilling at 5,209 feet.

Sterling Pacific Oil Co.'s No. 2, Section 33-18-2w5, is rigging up. Same company's No. 1, drilled last year by Imperial Oil, Ltd., has been making a fair production, around 40 bbls., from the lime. Rotary tools will be used for No. 2. This is the first new location made by Imperial Oil, Ltd., for some time. It is in the south end of the field, due south of the Mercury producers, and north and west of Merland's No. 1, now being completed.

Central Turner Valley

In the Central Turner Valley area, New Illinois-Alberta Oils' No. 1, LSD 14, Section 12-20-3w5, has been given a production test following cleaning out and shooting. With a fairly heavy wet gas flow the crude naphtha recovery was only 15 bbls., against 100 bbls. when the well was first brought into production some years ago. It bottoms at 3,890 feet, 228 feet in the lime, and two shots at this depth failed to develop satisfactory production. Drilling will probably be resumed early in June.

Keho Lake Operations

Hudson's Bay Oil & Gas Co.'s No. 1 Keho, LSD 2, Section 17-11-22w4, in the Keho Lake district, continues to be the center of interest in Southern Alberta. After casing off two flows of medium

(Continued on Page 98)

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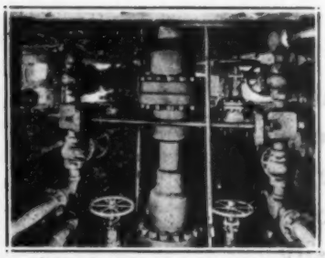
Kettleman Hills Causes Some Anxiety

It May Be the Means of Increasing California Production Beyond Refinery Needs. New Law Being Closely Analyzed

By L. P. Stockman
Staff Correspondent, California Fields

LOS ANGELES, Calif., May 23.—Crude oil production in California showed a slight tapering off during the past week, but is expected to resume its upward trend again within the next 15 days. This projected increase will be due primarily to the completion of two new wells in the North Dome of Kettleman Hills as most of the other fields throughout the State should remain relatively stable. Based on progress during the past few weeks, it is believed that four wells will be completed between now and the end of June with the result that field production should reach a considerably higher level. Both of the last two completions in the North Dome, No. 1 Felix of the Petroleum Securities and No. 2 Huffman of the Superior Oil Co., have been holding up in good shape and their aggregate production is expected to show an increase within the next week or 10 days due to the installation of additional high-pressure gas traps.

The situation at Kettleman Hills is causing the executives of major companies considerable anxiety as they recognize the threat presented by this prolific field. It is hoped, of course, that the recently enacted compulsory curtailment measure will throttle down the production of this field, but in the meantime operators cannot be forced to curtail production. Kettleman Hills is ostensibly curtailing in conformity with the statewide curtailment program, but as a matter of fact little effort has been made to conform with the existing curtailment program. The Sharkey bill will not become operative until about September 1, with the result that field production of the North Dome is expected to register a substantial increase during the interim.

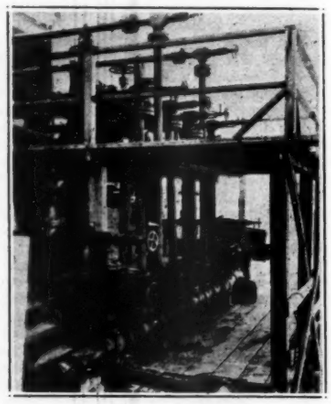


In the cellar of Standard Oil Co.'s No. 33-35J in the Kettleman Hills Field in California.

Several conferences have been held in an effort to retard production activities in the North Dome, but so far nothing tangible has been arrived at. The Kettleman North Dome Association and the Standard Oil Co., however, have tentatively agreed to limit their individual production to 25,000 bbls. per day each. Both of these units have two new wells scheduled for completion within the next 30 days and should consequently reach their established quota. Kettleman Hills will probably present a difficult problem for solution when the oil and gas commissioners meet to determine the allowable production of the State in conformity with the rules and regulations of the recently enacted compulsory curtailment bill. The problem of determining the State's allowable production will not be difficult but the question as to how much should be allocated to each field will be another matter. It remains to be seen whether the commissioners have sufficient authority to peg the allowable daily production of Kettleman Hills or whether they will be obliged to recognize the field's actual potential and then order a cut based on the field's potential with respect to the total potential production of the State.

Analyzing Sharkey Bill

It is presumed to be the intent of the bill to recognize the potential daily production of each field and to apply a definite percentage of curtailment. Upon application of the bill this may be changed somewhat. Section 6 of the Sharkey bill may afford the commissioners sufficient authority to discriminate between certain fields, although apparently this is not the real intent of the measure in question. Section 6 provides that "if upon the hearing the commission finds that waste is being permitted and if such waste be incident to or result from the wasteful overproduction of crude petroleum oil the commission shall make an order fixing therein the amount of nonwasteful production for the State of California and for the several oil fields within the State respectively found to be contributing to such waste and for each field therein fixing the amount of allowable production for the several zones producing properties and wells in such field so as to stop said waste. The aggregate amount of production without waste as so determined shall be so allocated by the commission among the different fields and different zones, properties and wells in the respective fields so as to avoid discrimination in the quantity of production from any field or zone or property as compared with the quantity of production from any other field, zone or property, taking into consideration the extent of the respective fields, zones or properties, the relative accessible oil reserves at the times of allocation, the stage of development of each field or zone, the potential production of the wells, the size and condition of the wells, the quality of the oil produced from each field or zone and the demand therefor."



Gates and connections on Associated Oil Co.'s No. 1 Whepley in the Kettleman Hills Field.

Light and Heavy Oil

This section of the recently enacted Sharkey bill gives the conservation commissioners sufficient authority to discriminate between light and heavy oil, but the question will arise as to what will constitute light and heavy oil. When Kettleman Hills was discovered by the Milham Exploration Co., it was generally recognized as a field capable of producing 60 gravity oil similar to that now being produced in the North Belridge Field of Kern County. Subsequent development, however, revealed a deeper zone in the North Dome of Kettleman Hills which proved more prolific than the overlying Elliott zone, with the result that operators are now developing the deep Ochsner zone in preference to the Elliott horizon. This deeper drilling changed the picture, however, as the Ochsner zone is producing a crude oil averaging approximately 38° A.P.I. This oil has a relatively high gasoline content and yields a normal quantity of residual fuel oil. The North Belridge Field can be taken out of the picture because of the extremely high gravity oil produced, averaging approximately 58°, but it is doubtful if the conservation commissioners could apply this same rule against the deep Ochsner zone at Kettleman Hills because the oil from this area is a normal black oil. As a matter of economics, it would be more advantageous for refiners to operate on Kettleman Hills oil in preference to util-

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Commodity—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Crude oil	.....	.....	.....	.....	.....	68,690
Fuel oil	.....	.....	.....	.....	.....	71,950
Diesel and gas oil	.....	.....	.....	.....	892,230	1,542,044
Gasoline	56,274	8,039	397,344	56,763	5,757,282	6,367,166
Kerosene	.....	.....	.....	.....	41,512	.....
Coastwise—						
Crude oil	551,099	78,728	629,499	89,928	8,501,343	6,089,335
Fuel oil	280,820	40,117	366,834	52,405	5,394,695	6,643,177
Diesel and gas oil	47,490	6,786	5,320	760	619,486	737,981
Gasoline	296,725	42,389	263,091	37,584	4,797,819	4,291,730
Kerosene	.....	.....	14,735	2,105	147,041	53,527
Naphtha distillate	.....	.....	.....	.....	4,952	.....
Exports—						
Crude oil	219,544	31,363	63,097	9,014	2,634,356	2,507,411
Fuel oil	390,108	55,730	303,230	43,319	5,799,276	6,796,571
Diesel and gas oil	152,066	21,724	37,177	5,311	1,439,610	1,941,490
Gasoline	252,673	36,096	132,720	18,960	3,816,204	6,065,351
Kerosene	36,907	5,272	.....	.....	596,136	1,522,476
Lubricants	.....	.....	.....	.....	18,978	10,082

TANKER SHIPMENTS FROM SAN FRANCISCO TO ATLANTIC AND GULF PORTS

Diesel and gas oil	.....	.....	.....	.....	.....	88,230
Gasoline	.....	.....	.....	.....	267,499	440,188
Lubricants	.....	.....	.....	.....	14,015	2,946
Coastwise—						
Fuel oil	13,909	1,987	138,510	19,830	1,606,307	1,482,805
Diesel and gas oil	.....	.....	.....	.....	88,756	136,143
Gasoline	68,111	9,730	81,063	11,581	1,140,413	1,572,239
Kerosene	10,057	1,437	.....	.....	110,439	111,371
Exports—						
Crude oil	71,546	10,221	.....	.....	77,556	3,075
Fuel oil	55,331	7,904	.....	.....	452,255	441,559
Diesel and gas oil	.....	.....	.....	.....	232,283	124,540
Gasoline	60,924	8,703	249,862	49,980	1,509,894	1,462,229
Kerosene	20,108	2,872	7,090	1,013	313,061	251,449
Lubricants	.....	.....	.....	.....	.....	1,177

TWELVE MILLION FOOT GASSER BEST OF THE WEEK IN THE CORNING AREA

By Special Correspondent

CORNING, N. Y., May 23.—The Lycoming Gas Co. completed a large gasser on the Ashton farm in the Tioga County Field in Pennsylvania. It was the first test drilled on the property. It made an initial flow of 12,000,000 feet. The hole is at a total depth of 3,975 feet.

Crescent Producing Co.'s No. 1 Smith in the Wayne, N. Y., Field, is a 1,000,000-foot gasser at 1,750 feet and the Wittmer Oil & Gas Properties' No. 1 Ernest in the same field was due for completion at any time.

East Penn Not Sold

The East Penn Development Co. has not been sold to the Lycoming Natural Gas Co., a subsidiary of the Standard Oil Co. of New Jersey. The East Penn Development Co. which is a subsidiary of the Pennsylvania Gas & Electric Corp. in turn a subsidiary of the American Electric Power Corp. has entered into a contract with the Standard Oil Co. of New Jersey for the sale of part of its natural gas production in the Tioga County gas field to the Lycoming Natural Gas Co., but no sale of property is involved.

The following figures were compiled previously to the past week's crop of wells:

Total amount of gas available from new wells in the Tioga and Wayne-Dundee-Altay Fields is approximately 307,000,000 feet a day, according to a survey of the field recently made. This estimate, which is more conservative than liberal, takes into consideration six producing wells in Tioga County, Pennsylvania, and 30 in the New York Field. There are more than that number at this time.

The Meaker well in Tioga County, which is said to have a capacity of 100,000,000 feet is listed at 66,000,000 feet because its capacity is officially listed at that figure.

An examination of figures for two gas fields will show that although only six producing wells are located in the Tioga Field, their total production is greater than that of 30 in the New York territory, the figures being 157,000,000 feet for Tioga and 150,000,000 feet for Wayne-Dundee-Altay. Tioga wells average a production of 26,000,000 feet while New York wells average only 5,000,000 feet. The Pennsylvania average, however, is boosted considerably by the Meaker well.

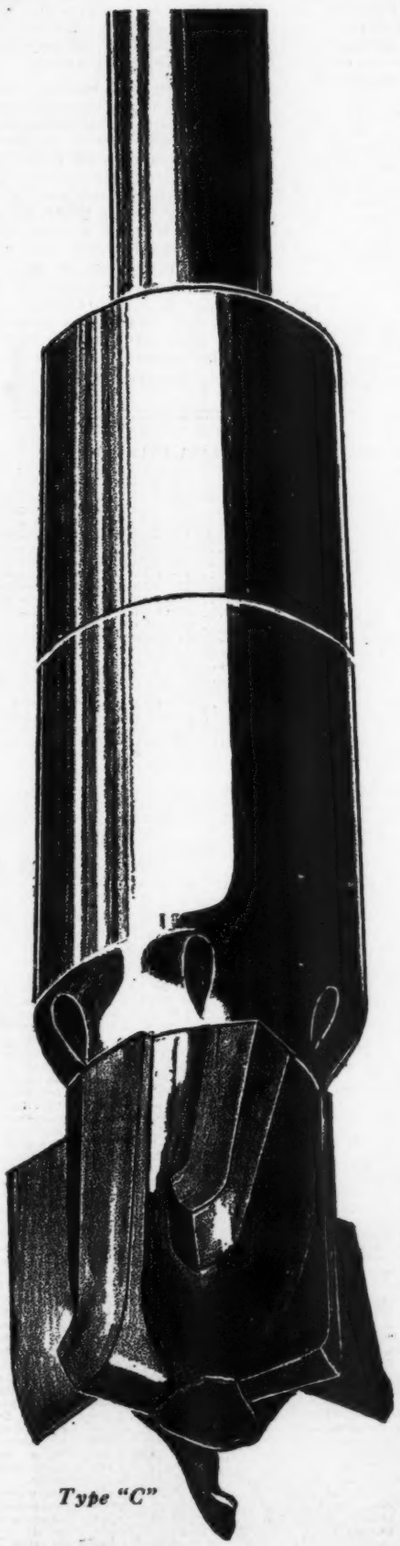
While gas men have made public no estimate as to the probable capacity of the entire resources of the new gas fields in this district, they are certain that the present available production will be materially increased as new wells come in, so that in a year or less it may pass the 1,000,000,000 mark, more than three times its present capacity.

Future of Field

The future total production will reach a figure beyond present computation if the Van Etten and other anticlines, as

(Continued on Page 98)

Television *of* Drilling



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This Core Barrel gives you an absolutely true picture of any formation. Circulating water keeps the barrel clean through ridges and cave-ins until bottom is reached. Then the water is shut off and the diamond-like hardness of the head quickly cuts the hardest sands. The split liner lets you remove the core whole and clean every time—with about two minutes' work.

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ining a crude averaging in the neighborhood of 25°. As one reads the provisions of the Sharkey bill and ponders over its enforcement, it becomes quite evident that enforcement work will require considerable study and application. This is particularly obvious when one considers the relative merits of crude oil from Kettleman Hills and Playa Del Rey. From a refining standpoint, Kettleman Hills crude is far superior to the sulphurous oil yielded by Playa Del Rey. This brings up the question as to what will be the relative degree of curtailment in these two fields. From the standpoint of heavy unrefinable crude produced in the San Joaquin Valley and which is marketed direct to commercial consumers, the curtailment commissioners will be faced with the problem of determining just how much of this oil can be absorbed and at the same time permit liquidation of the 105,844,270 bbls. of heavy crude and refinery residuum now in storage. The entire problem is a complex one and it will probably be six months or more before the curtailment plan is in smooth operation. Major companies have recognized the necessity of supplying all legitimate refiners with a sufficient amount of crude to meet normal requirements and the tentative plan to organize a buyers' agency has considerable merit and may therefore ultimately become a reality.

Gas Law Inactive

Enactment of the new compulsory curtailment measure is of particular significance at the present time in view of the fact there is a gas conservation law on the statute books of the State. The gas law has never been enforced, although the state department of natural resources has instituted several suits since its passage. Judge Strother will resume hearings in the Superior Court at Hanford on June 12, at which time he is expected to render a decision on the State's request for an injunction prohibiting Kettleman Hills operators from further waste of natural gas. Judge Strother granted the State a temporary injunction several weeks ago but on a petition of operators set compliance with the injunction over to June 12. The court decreed at that time that companies operating in the North Dome should render weekly reports showing the results of operation during the interim. For the week ending May 9, the Associated reported a production of 11,265 bbls. of oil and 183,843,000 feet of natural gas. Of the gas produced, the Associated was obliged to blow 13,622,000 feet of natural gas into the air, although this waste only occurred on two of the seven days covered by the report. The Kettleman North Dome Association for the week ending May 8 reported a total production of 20,376 bbls. of oil and 933,186,000 feet of natural gas with a notation that all wet gas was delivered to The Texas Company for processing. The Texas Company for the first two days of the month reported that it treated 1,678,162 feet of natural gas and disbursed 1,157,182 feet to public utilities, 58,896 feet to the Kettleman North Dome Association, in addition to blowing 389,863 feet to the air and a shrinkage and plant fuel of 72,221 feet. The Superior Oil Co. for May 1 and 2 produced 22,300 bbls. of oil and 30,786,000 feet of natural gas. Of the gas production, 8,349,000 feet was utilized and 19,662,000 feet blown to the air. The Kettleman North Dome Association is expected to let a contract calling for the killing and control of its two wells in the North Dome which are at present producing from the Elliott high-pressure gas zone. These wells, No. 8 Milham, doing 55,260,000 feet of natural gas, and the original Continental well in Section 12-22-17 flowing 77,395,000 feet, are undesirable because of the excessive high gas-oil ratio. The Standard is also expected to undertake control work which will consist of the killing of wells producing from the Elliott zone and their subsequent deepening.

Playa Del Rey

There was only one well listed for completion in the Playa Del Rey Field during the past week, and, while additional completions will be chalked up from time to time, decreased drilling will limit the number finished from now on. The new producer added this week was W. M. Crawford's No. 3 Venice, which was brought in on the beam pumping 105 bbls. of 22.6 gravity oil per day from 3,822 feet, the hole having been completed with a 5-inch liner carrying 420 feet of perforated. The Union is expected to complete its No. 1 Vidor, an outpost in the extreme eastern part of the field about 3,000 feet removed from nearest production, some time within the next 15 days. This well looks good for commercial production, although no indication is available as to its possible initial. The Union should also complete No. 8 Townsite and this well, which has been carried down into the Schist for a depth of approximately 200 feet, is expected to be given a production test within the next few days.

(Continued on Page 96)

MANY WILDCAT PROJECTS BEING CONSIDERED IN MICHIGAN FIELD

By Paul A. Elliott

MUSKEGON, Mich., May 23.—Although many new wildcat drilling projects are being considered throughout Michigan new operations have been restricted recently to offset wells in proved areas and wells that are being drilled for additional gas to supply two new lines to be constructed in the vicinity of Mount Pleasant.

Two new permits issued this week by the geological division of the State Conservation Department are for wells to be drilled in the vicinity of the new Kalamazoo-Hornick well which extended the Mount Pleasant Field more than a mile and a half east of previously proved territory.

These new locations and other drilling in the vicinity of the extension well are carrying development into Greendale Township, Midland County, where the Mount Pleasant Field was opened three years ago by the Pure Oil Co.

Four new wells are being started in this vicinity, including those on the following new locations: Columbia Oil & Gas Co., of Kalamazoo and Clare, Mich., No. 1 Fred and Percies McLaughlin, NW SW NW Section 15-14n-2w, Greendale Township, and W. L. McClanahan's No. 1 A. G. Struble, SW SE Section 10-14n-2w, also Greendale Township.

There were no successful completions in Michigan during the past week. One wildcat venture was abandoned as a dry hole and another is being plugged back to shoot a gas sand struck part way down the hole.

C. R. Smith, trustee's No. 1 J. Jorgensen, SE NW Section 21-22n-9w, Haring Township, Wexford County, is being abandoned as a duster at 4,141 feet.

Henry Miltner's No. 1 Miller et al, NW NE NE Section 24-24n-7w, Pioneer Township, Missaukee County, is being plugged back from a total depth of 3,580 feet to 2,630 feet, where a flow of gas originally estimated at 2,000,000 cubic

(Continued on Page 97)

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Olympic Realty Corp., No. 1 Barnes, Los Angeles Co.	14- 2-15	5,303	hd. sd. drilling
Hines Pet., No. 1 Ocean Park, Los Angeles Co.	9- 2-15	5,702	br. sh. drilling
Taylor Oil Co., No. 1 Culver, Los Angeles Co.	12- 2-15	6,238	suspended
Mesmer City Corp., No. 1 Mesmer, Los Angeles Co.	24- 2-14	5,501	sd. sh. drilling
Dwyer & Becker, No. 1 Compton, Los Angeles Co.	17- 3-13	4,520	suspended
Allison Synd., No. 1 Baldwin, Los Angeles Co.	8- 2-14	5,110	suspended
Cal. Ventura Oil Co., No. 1 Manhattan, Los Angeles Co.	30- 3-14	6,525	suspended
Cal. Ventura Oil Co., No. 1 Hermosa, Los Angeles Co.	31- 3-14	3,396	suspended
Cal. Ventura Oil Co., No. 2 Hermosa, Los Angeles Co.	31- 3-14	3,300	suspended
Cal. Oilfields Corp., No. 1 Hermosa, Los Angeles Co.	31- 3-14	3,560	suspended
Carniel Oil Corp., No. 1 Hermosa, Los Angeles Co.	31- 3-14	3,214	cleaning out
Hermosa Expl. Co., No. 1 Hermosa, Los Angeles Co.	31- 3-14	3,050	cleaning out
Kellogg, W. R., No. 1 Hermosa, Los Angeles Co.	6- 4-14	2,645	cemented
Westwood Pet., No. 1 Hermosa, Los Angeles Co.	6- 4-14	3,200	testing
Tulsa Oil Co., No. 1 Hermosa, Los Angeles Co.	6- 4-14	3,060	cleaning out
McMahon & McDonald, No. 1 Watts, Los Angeles Co.	12- 3-14	4,665	suspended
Staple Oil Co., No. 1 Manhattan, Los Angeles Co.	24- 3-15	792	sd. sh. drilling
Ewert, W. S., No. 1 Watson, Los Angeles Co.	20- 4-13	...	location
York & Smullin, No. 1 Watson, Los Angeles Co.	29- 4-13	3,698	cleaning out
Wilmington Consd., No. 1 Watson, Los Angeles Co.	17- 4-13	1,013	sd. sh. drilling
Brubaker, W. O., No. 1 Van Nuys, Los Angeles Co.	11- 2-15	2,700	suspended
Rucker & Croul, No. 2 Puente, Los Angeles Co.	27- 2-10	2,200	suspended
Arden Oil Co., No. 1 Puente, Los Angeles Co.	15- 2-10	3,325	suspended
D. & B. Oil Co., No. 1 Puente, Los Angeles Co.	3- 2-10	4,620	suspended
El Dorado Oil Co., No. 1 Puente, Los Angeles Co.	30- 2- 9	1,093	suspended
Marcel Pet. Co., No. 1 Puente, Los Angeles Co.	31- 2- 9	3,100	suspended
Cudahy Oil Co., No. 1 Bell, Los Angeles Co.	36- 2-12	1,870	recemented
The Texas Company, No. 1 Montebello, Los Angeles Co.	4- 2-12	3,670	hd. sd. drilling
Huntington Cent. Oil Co., No. 1 Montebello, Los Angeles	34- 1-11	mtl.	building rig
Celito Oil Co., No. 1 Monterey Park, Los Angeles Co.	23- 1-12	5,278	suspended
Hammer, Fred, No. 1 Alhambra, Los Angeles Co.	24- 1-13	3,412	suspended
Los Gatos Oil Co., No. 1 El Monte, Los Angeles Co.	16- 1-11	2,280	suspended
Rucker, L. W., No. 1 Calabasas, Los Angeles Co.	26- 1-17	753	suspended
Olympic Corp., No. 1 Calabasas, Los Angeles Co.	18- 1-17	5,880	resume work
Nesa Pet., No. 1 Newport, Orange Co.	31- 6-10	4,910	suspended
Hall, H. L., No. 1 Newport, Orange Co.	20- 6-10	790	suspended
Gesell, T. P., No. 1 Newport, Orange Co.	29- 6-10	1,470	cleaning out
Standard, No. 1 Newport, Orange Co.	26- 6-10	4,700	hd. sd. drilling
Western Gulf, No. 1 Santa Ana, Orange Co.	12- 3- 8	3,267	suspended
The Texas Company, No. 1 Olive, Orange Co.	7- 4- 9	5,470	sd. sh. drilling
Cohen, H., No. 1 Sunset Beach, Orange Co.	36- 6-11	....	location
Gleck Oil Co., No. 1 Sunset Beach, Orange Co.	36- 6-11	3,811	sd. sh. drilling
Western Gulf, No. 1 Santa Ana, Orange Co.	13- 3- 8	3,267	suspended
Beck, F. A., No. 1 Corona, Riverside Co.	8- 4- 6	481	sd. sh. drilling
Beck, F. A., No. 1 Beaumont, Riverside Co.	1- 3- 1	520	sd. sh. drilling
Grey, H. H., No. 1 Redlands, San Bernardino Co.	35- 1- 2	2,892	suspended
Borderland Oil Co., No. 1 Encinitas, San Diego Co.	12-13- 4	2,519	suspended
Borderland Oil Co., No. 1 Point Loma, San Diego Co.	36-16- 3	4,966	hd. sd. drilling
South Bay Oil Co., No. 1 Border, San Diego Co.	31-18- 2	....	location
Carr, O. K., No. 1 Capistrano, San Diego Co.	13- 8- 8	5,250	cleaning out

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Western Gulf, No. 1 Santa Maria, Santa Barbara Co.	5- 9-35	6,570	hd. sd. drilling
Fields Gas Co., No. 1 Santa Maria, Santa Barbara Co.	8- 9-33	5,570	suspended
Barnsdall, No. 1 Gato Ridge, Santa Barbara Co.	9- 8-32	6,510	plugging back
Midwest Oil Co., No. 1 Los Alamos, Santa Barbara Co.	2- 7-33	2,252	sd. sh. drilling
Smith, W. E., No. 1 Lompoc, Santa Barbara Co.	18- 7-34	100	tech. spud
General Pet., No. 1 Goleta, Santa Barbara Co.	21- 4-28	4,523	gas—shut in
General Pet., No. 2 Goleta, Santa Barbara Co.	21- 4-28	4,350	gas—shut in
General Pet., No. 3 Goleta, Santa Barbara Co.	21- 4-28	5,183	cleaning out
General Pet., No. 133 Goleta, Santa Barbara Co.	21- 4-28	2,030	suspended
General Pet., No. 134 Goleta, Santa Barbara Co.	21- 4-28	2,053	suspended
General Pet., No. 136 Goleta, Santa Barbara Co.	21- 4-28	2,047	suspended
General Pet., No. 137, Goleta, Santa Barbara Co.	21- 4-28	2,050	suspended
General Pet., No. 138 Goleta, Santa Barbara Co.	21- 4-28	4,931	suspended
General Pet., No. 139 Goleta, Santa Barbara Co.	21- 4-28	2,051	suspended
Boles Oil Co., No. 140 Goleta, Santa Barbara Co.	22- 4-28	1,040	suspended
U. S. Pet., No. 141 Goleta, Santa Barbara Co.	20- 4-28	1,035	suspended
U. S. Pet., No. 142 Goleta, Santa Barbara Co.	20- 4-28	2,012	suspended
U. S. Pet., No. 143 Goleta, Santa Barbara Co.	20- 4-28	1,019	suspended
El Camino, No. 149 Goleta Tideland, Santa Barbara Co.	22- 4-28	1,035	suspended
South. Cal. Drlg. Co., No. 1 Goleta, Santa Barbara Co.	12- 4-29	2,900	Sespe form.
Bolsa Chica, No. 191 Goleta, Santa Barbara Co.	24- 4-29	4,191	testing
Bellview Oil Co., No. 159 Goleta, Santa Barbara Co.	24- 4-29	2,099	suspended
Cochran, J. H., No. 1 Naples, Santa Barbara Co.	7- 4-29	5,134	resume work
Johnson, George, No. 1-A Goleta, Santa Barbara Co.	19- 4-27	3,050	Sespe form.
Cuyama Oil Corp., No. 1 Cuyama, Santa Barbara Co.	12-10-27	rig	suspended
Hart Pet. Co., No. 1 Cuyama, Santa Barbara Co.	27-10-26	rig	suspended
Sovereign Oil Co., No. 1 Santa Maria, Santa Barbara Co.	30-10-35	5,500	cleaning out
Pacific Western, No. 1 Gibraltar, Santa Barbara Co.	14- 5-27	2,345	suspended
Associated, No. 1 Rincon Creek, Ventura Co.	19- 4-24	2,050	suspended
C.C.M.O. Co., No. 2-A Rincon, Ventura Co.	23- 3-24	10,030	sd. sh. drilling
Continental, No. 1 Rincon, Ventura Co.	23- 3-24	3,990	sd. sh. drilling
Pure Oil Co., No. 8 S. P. Canyon, Ventura Co.	15- 4-21	2,591	suspended
Superior Oil Co., No. 1 Sespe, Ventura Co.	14- 4-21	6,360	sd. sh. drilling
Merchants Pet., No. 1 Sespe, Ventura Co.	1- 4-20	1,285	deepening
Lockwood Valley Oil Co., well No. 1, Ventura Co.	32- 8-21	1,015	suspended
Magu Synd., No. 1 Oxnard, Ventura Co.	17- 1-21	3,790	hd. sd. drilling
Cal Mex Oil Co., No. 1 Conejo, Ventura Co.	12- 1-20	188	sd. drilling
Hansen Pet., No. 1 Conejo, Ventura Co.	24- 1-20	230	hd. sd. drilling
Wilshire Oil Co., No. 1-A Buttonwillow, Kern Co.	7-29-24	7,000	cleaning out
Kent & McDonald, No. 1 Temblor Hills, Kern Co.	3-32-22	1,672	suspended
Federal Drlg. Co., No. 1 Buena Vista, Kern Co.	20-31-24	5,367	suspended
General Pet., No. 1 Beiridge, Kern Co.	30-28-21	4,549	br. sh. drilling
The Texas Company, No. 1 Beiridge, Kern Co.	22-27-20	5,045	suspended
Standard, No. 2 Beiridge, Kern Co.	31-27-20	5,430	reaming
Ohio Oil Co., No. 1 Beiridge, Kern Co.	36-27-20	5,450	recemented
Reward Oil Co., No. 1 Beiridge, Kern Co.	34-27-20	5,155	Tombler
Continental, No. 1 Beiridge, Kern Co.	26-27-20	4,711	sd. sh. drilling
Wallace, K. C., No. 1 Beiridge, Kern Co.	32-29-21	4,223	recemented
Rio Cal. Pet., No. 1 Shale, Kern Co.	2-27-18	2,355	redrilling
Wicker, Sy, No. 1 Arvin, Kern Co.	12-30-28	1,250	suspended
Shell, No. 1 Weed Patch, Kern Co.	29-30-29	5,450	cleaning out
Shell, No. 2 Weed Patch, Kern Co.	29-30-29	6,410	suspended
Shell, No. 3 Weed Patch, Kern Co.	32-30-29	5,670	sd. sh. drilling
Osborn, Colter, No. 1 Weed Patch, Kern Co.	15-30-29	5,275	sd. sh. drilling
Mohawk Oil Co., No. 1 Weed Patch, Kern Co.	32-29-29	6,150	suspended
Mohawk Oil Co., No. 2 Weed Patch, Kern Co.	4-31-29	rig	suspended
Alpine Oil Co., No. 1 Weed Patch, Kern Co.	13-31-29	3,785	suspended
Standard, No. 1 Devils Den, Kern Co.	14-25-18	3,813	plug 2,03[illegible] ft
Hannah, Tom, No. 1 Devils Den, Kern Co.	25-25-18	3,935	cemented
Cumberland Oil Co., No. 1 Devils Den, Kern Co.	21-26-18	1,590	suspended
Langstroth, F. B., No. 1 Blackwell Corner, Kern Co.	14-26-19	rig	suspended
E. J. Miley, No. 1 Blackwell Corner, Kern Co.	17-26-19	rig	suspended
Shell, No. 1 Semitropic, Kern Co.	17-27-23	9,700	plug 5,571 ft
Moran & DeCamp, No. 1 Mojave, Kern Co.	26-10-14	750	suspended
Kendall Dev. Co., No. 1 Mojave, Kern Co.	27-11- 9	496	sd. sh. drilling
Meridan Oil Co., No. 1 Antelope, Kern Co.	11- 9-15	3,804	suspended
Ritchie, J. J., No. 1 Tejon, Kern Co.	33-11-19	5,600	sd. sh. drilling
Associated, No. 1 Jacalitos, Orange Co.	32-21-15	4,670	sd. sh. drilling
Panorama Oil Co., No. 1 Carizzo, San Luis Obispo Co.	7-31-21	4,019	fishing
Tray El Oil Co., No. 1 Carizzo, San Luis Obispo Co.	7-32-22	1,501	hd. sd. drilling
Cities Service, No. 1 Creston, San Luis Obispo Co.	20-28-15	101	sd. drilling
Latin Amer. Pet., No. 1 Shandon, San Luis Obispo Co.	21-27-15	4,615	recemented
Schilling, C., No. 1 Atascadero, San Luis Obispo Co.	24-28-12	1,000	sd. sh. drilling
Martin, J., No. 1 Edna, San Luis Obispo Co.	5-31-13	3,010	suspended
Schockley, C., No. 1 Pismo, San Luis Obispo Co.	13-32-13	2,094	suspended
Pacific Inland, well No. 1, Monterey Co.	19-23-15	1,322	hd. sd. drilling
Brown, W. F., No. 1 Parkfield, Monterey Co.	15-22-14	1,048	suspended
Irma Investment Co., No. 1 Dudley Ridge, Kings Co.	7-22-20	1,245	testing
O'Donnell, J. E., No. 1 Dudley Ridge, Kings Co.	7-22-20	1,635	gas well—idle
Valley Expl. Co., No. 1 Dudley Ridge, Kings Co.	20-22-20	3,750	suspended
Kettleman Lakeview, No. 1 Tulare Lake, Kings Co.	11-22-19	1,304	cleaning out
Purman, T. H., No. 1 Reef Ridge, Kings Co.	36-23-17	3,595	br. sh. drilling
Seymour, L. W., No. 1 Avenal, Kings Co.	16-22-16	1,148	cleaning out
Utah Dev. Co., No. 1 Pyramid Hills, Kings Co.	13-24-18	....	material
Twin State Oil Co., No. 1 Point Arena, Mendocino Co.	14-12-17	6,630	sd. sh. drilling
Orinda Pet., well No. 1, Contra Costa Co.	32- 1- 3	2,012	cleaning out
Pettingall, C. E., No. 1 Edna, Porterville, Tulare Co.	15-22-27	930	hd. sd. drilling
Knapp, George, No. 1 Porterville, Tulare Co.	30-23-27	700	suspended
Inland Valley Oil Co., No. 1 Visalia, Tulare Co.	24-17-24	2,092	suspended
Larson, S. E., No. 1 Tulare Lake, Tulare Co.	20-24-23	520	cleaning out
Colusa Oil Co., No. 1 Bush, Colusa Co.	31-15- 4	916	hd. sd. drilling
Oakdale Oil Co., No. 1 Oakdale, Stanislaus Co.	3- 2-10	4,162	hd. sd. drilling
Orland Oil Synd., No. 1 Orland, Tehama Co.	31-23- 3	2,520	redrilling
Sargent Oil Co., No. 1 Sargent, Santa Clara Co.	1-12- 3	rig	suspended

Disregard of Proration in East Texas

Field Last Week Averaged 303,761 Bbls. Per Day With an Allowable of 160,000 Bbls. Salt Water Situation Not Serious

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., May 25.—Proration in the East Texas fields is not yet a fact. The Kilgore Pool with an allowable of 60,000 bbls. a day produced 124,250 bbls. a day in the past week. The Lathrop Pool with an allowable of 35,000 bbls. produced 61,511 bbls. and the Joiner Pool, which was given an allowable of 65,000 bbls. produced 118,000 bbls. The total production of the field was 303,761 bbls. per day with an allowable of 160,000 bbls. per day.

Whether or not proration under present laws holds in East Texas, and the State as a whole, will no doubt be definitely decided when three picked Federal judges meet in Houston to grant or disapprove a permanent injunction to the Macmillan Petroleum Corp., to prevent the Railroad Commission from interfering with producing its wells as it desires in order to fulfill contracts previously made. The three judges will meet June 24, accepting or voting down the Howsley bill which provides for a vast amount of power to the State and commission in enforcing proration, will be a deciding factor in producing oil in the future of Texas. This bill was not voted on during the session of the legislature which adjourned May 22, but a special session will probably be called within a short time by Governor Sterling and this will be one of the main features of that session. The Railroad Commission has signified to the governor that it is practically helpless in enforcing proration at the present time, and is alarmed over the present situation, consequently the governor is expected to take steps to alleviate the situation, one method being the extra called session of the legislature to discuss and vote on the Howsley Proration Bill which is being bitterly fought by antiprorationists.

Salt water has not presented itself as a great ogre in the East Texas district, but several wells in the Kilgore Pool, northern Rusk County, and one well in the Joiner Pool also in Rusk County, has shown up as a spectre of what may follow, consequently the operators in these pools, should make some agreements, as a few of the major companies did, to pinch in any well drilled too near the water line, and from which water may be expected in a short time, and if proration is carried out, and all wells pinched into a percentage of their potentials the operators would no doubt profit in the long run by holding their production down, and likewise hold back water encroachment. The Van and Yates Pools may be held up as two good examples of what proration or pinching in production will do for a field, whereas the Winkler Field may be cited as a lesson directly in contrast to the two ideally produced fields, Winkler not even being able to make its present allowable, nor has it for many months.

Proration Schedules

The Henderson (Joiner) district proration schedule effective 7 a.m., May 16 to 7 a.m., May 31, 1931, showed the area having 230 wells having a 24-hour potential of 284,850 bbls. with a margin allowable of 22,829 bbls. per day, margin potential of 262,021 bbls. and an allowable on potential of 42,171 bbls. According to the proration schedule the lease and company allowable is 65,000 bbls. per day for the area.

The Kilgore district schedule, covering the period from May 16 to June 1, gives the field a 24-hour potential of 503,112 bbls. from 230 wells. The daily allowable of the field is 60,000 bbls. Twenty-seven hundred barrels is the total marginal wells not given an allowance on potential.

Status of Operations

The latest report from the field shows 133 wells drilling in the Joiner area, with 35 first reports and 19 completions for the week. The Kilgore area has 187 drilling wells with 49 first reports and 33 completions for the week. The Lathrop area in Gregg County is third in the number of activities, there being 99 drilling wells, 51 first reports and 21 completions. The number of first reports give an indication of how activities are gaining in this area, there being 16 more first reports in the area for the week than there were in the Joiner Pool, the oldest area of the three.

The total number of drilling activities throughout the several counties of the district was 495 wells, with 141 first reports turned in during the week and 77 completions. At present there are only 3 wildcats drilling in Rusk County, and 11 in Smith County. Upshur County has 12 wildcats or semiwildcats drilling, Nacogdoches has 14 drilling with 3 locations reported. Seven wildcats are drilling in Harrison, and two new locations were announced this week. Harrison, the next County east of Rusk, has had several unsuccessful tests, and consequently is not as interesting as it was a few weeks ago when several tests were being closely watched to see if the western rim of the Sabine uplift would shift sharply to the east and production proven in that county. Those tests were discouraging in that respect.

North or South Limit Unknown

The East Texas producing area has virtually been proven for a distance of over 33 miles from southwest to northeast with nothing on either of these two ends to define the limits. The Lathrop area is proven for a width of around 9 miles while the Joiner area is only approximately 5 miles from east to west, dry holes on both sides limiting production in those directions while outpost wells to the southwest continue to stretch the producing area in the direction of Cherokee County.

The Kilgore area is narrow, having been defined by water and dry holes on the western side, and also on the eastern side. Tidal Oil Co.'s No. 1 Laird, which came in this week on the eastern side of the field, is one of two wells which is flowing on the southeastern side of the field, two others not flowing. The Tidal well made 1,197 bbls. in 14 hours flowing open through 2½-inch tubing. It topped the Woodbine sand at 3,681-3,723 feet, and was completed at the latter depth.

The Tidal Oil Co. has 10 wells drilling and has made 12 other locations to drill. The company has a daily potential of around 87,000 bbls. from its producing wells in the three areas, while its daily allowance is 3,386 bbls., the company abiding strictly by proration although some of the offset producers are flowing their wells without restriction.

To give some idea of the magnitude of the three producing areas in East Texas the Tidal Oil Co.'s potential producing acreage may be used as a gauge. The company has 2,000 acres proven good for production, or an amount equal to almost one-fifth the size of the Hobbs, New Mexico, Pool, which was so highly rated a year ago. The latter pool is a pigmy compared to the East Texas Field, which is still undefined on some of its sectors, and may reach for miles farther before walled in by dry holes.

Successful Water Shutoff

The Gulf Production Co. plugged back its No. 1 Birdsong, which was making salt water, and effected a complete water shutoff. The well was formerly drilled to a total depth of 3,661 feet and was plugged back 53 feet to 3,608 feet to accomplish the shutoff. The well is located in the northern part of the main body of the Kilgore Pool, in the W. P. Chisum Survey.

The Humble Oil & Refining Co. completed another western extension to the Lathrop area this week when its No. 1 O. C. Johnson in the John R. Crosby Survey, near Gladewater, in Gregg County, came in for 155 bbls. the first hour through a three-fourths-inch choke on tubing. Sand was topped at 3,599 feet. The Humble Pipe Line Co. has announced that it would extend a gathering system, probably an 8-inch line into this area, where the company has two producing wells, and would connect with other leases beside his own, thereby giving relief to some of the wells which have been shut down for lack of pipe line connection. The Selby Oil & Gas Co.'s No. 1 Snavely, southeast of Gladewater, the first extension well of this area, is one of those which has been needing a pipe line connection since its completion almost two months ago.

The Sinclair-Texas Pipe Line Co. is constructing an 8-inch electric-welded gathering line to its No. 1 Cole in the Sam Brooks Survey from its main line which connects with the Kilgore Pool. Work has already started on this line.

The Texas Pipe Line Co. has also announced that it would extend its 10-inch main line into the Gladewater area, for this is one of the most active areas at the present time in need of pipe line connection.

Withdraws as Buyer

The Stanolind Crude Oil Purchasing Co. announced this week that it would withdraw as a purchaser and shipper in the East Texas district, causing operators who had wells connected by the company to cast around for other connections. The Simms Oil Co., which has a gathering line and loading rack in the Lathrop area, agreed to connect with some of the wells disconnected by Stanolind and the Arkansas Pipe Line Co. also connected with some of the wells. The withdrawal as a purchaser became effective the morning of May 21.

This is the first disconnection to be made in the district by a major purchaser, but may be expected to be duplicated in many cases hereafter as has been the case in the Panhandle and Wichita Falls districts and other states during the past year when purchasing companies announced such a move, and ceased purchasing oil from outside producing companies and operators.

Gulf Will Extend System

The Gulf Pipe Line Co. is another major pipe line company in the district that may tie into some of the disconnected wells let go by Stanolind, for the company intends extending its gathering system in the Joiner and Kilgore areas, and will be in better position to serve the two fields if it becomes a purchaser of outside oil. The Arkansas Fuel Oil Co. announced that it would take more oil

EAST CENTRAL TEXAS WILDCATS

Week Ending May 25

ANDERSON COUNTY

Humble Oil & Refining Co.'s No. 6-A A. E. Todd, 700 ft. from N and 300 ft. from W lines of 56.8-ac. tract, David Clark Sur. ..... Pecan Gap 2,883-3,045 ft.; Austin chalk 3,435-90 ft.

ANGELINA COUNTY

R. O. Moore's No. 1 Abney Estate, 50 ft. N of Blk. No. 6, immediately out of city limits of Lufkin .... T. D. 1,350 ft.; set 6⅝-in. csg.; bailed dry.

Pollick Oil Co.'s No. 1 Sessions, 1,250 ft. from N and 1,250 ft. from E line of Jesus De La Garza Sur. .... Location.

BOWIE COUNTY

Tom Bell's No. 1 Merritt, 1,225 ft. from N and 875 ft. from E line of survey, T. S. McKinney Sur. ..... Shut down 2,313-16 ft.; to test.

Devore and Midfield's No. 1 Roy B. Cooper, 250 ft. from N and 250 ft. from E line of Cooper 115-ac. tract, W. M. Ward Sur. ..... Drlg. 1,950 ft.

Parkering-Jones et al's No. 1 W. W. Whybark, 200 ft. from S and W of SW cor. of J. A. Dyer Sur. ..... Derrick.

Lee Timberlake et al's No. 2 Julius N. Tidwell, 655 ft. from E and 2,510 ft. from S of survey in L. M. Rice Sur. ..... Salt water on drill stem test; shut down 3,000 ft.

CAMP COUNTY

W. E. Duke et al's No. 1 L. B. McCaslen, 2 miles NW of Lafayette, Mary Hays Sur. ..... Location.

CHEROKEE COUNTY

Company, well, farm name, section and block—	Remarks:
Ben Banner's No. 1 J. Williams Estate, 150 ft. S and 300 ft. W of SE cor. of the N. Hogg heirs and in the J. L. Hogg heirs Sur.	Shut down 2,950 ft.
D. H. Byrd et al's No. 1 Dixie, 1,385 ft. from N along E line of G. W. Forman Sur. from NW cor. of W. H. Felder 854-ac. tract and 150 ft. W at right angles to E line	Shut down 4,007 ft.
Grey et al's No. 1 McGee, 1,600 ft. from W and 200 ft. S of NE cor. of McKnight Sur.	Shut down 3,477 ft.
Helen-Clare Oil Co.'s No. 1 Mrs. M. P. Perkins, 1,800 ft. from N and 450 ft. from W of survey, Thomas Stafford Sur.	Rig up.
McDonald Bros.' No. 1 Newton, center of 113-ac. tract, Thomas Quevedo Sur., 3 miles N of Jacksonville	Drlg. 4,220 ft.
Rowan Nichols and Tidal Oil Co.'s No. 1 W. T. Norman, 330 ft. W of E line and 950 ft. N of S line, J. H. Irby Sur.	Rig up.
William A. Stone's No. 1 Blount Decker, 900 ft. E of E line of B. Selman Sur. and 1,200 ft. S of N line of E. M. Decker 406-ac. tract in George Ruddle Sur.	Shut down 4,615 ft.
Walton Oil Co.'s No. 1 E. Singletary, 250 ft. W and 150 ft. N of NE cor. of M. Lacey Sur. and in Water Sur. on Singletary 84-ac. tract	Drlg. 2,960 ft.

DALLAS COUNTY

Paris' No. 1 Wilkinson, 2,787 ft. from NW and 3,241 ft. from SW of John P. Anderson Sur. ..... T. D. 870 ft.; shut down.

(Continued on Page 83)

from outside producers in the Lathrop area.

The move on the part of these two major pipe line companies, and the extension of the Texas and the Humble lines apparently signifies a willingness to stabilize crude prices in this district, where prices hang in a balance.

The Arkansas Fuel Oil Co. has been running a total of around 15,460 bbls. per day from the Lathrop area, the Gulf Pipe Line Co. 8,972 bbls. per day, the Magnolia Petroleum Co. 9,022 bbls., the Humble Pipe Line Co. 31,622 bbls. and the Sinclair-Texas Pipe Line Co. 6,494 bbls. The Texas Company will purchase ratably around 10,000 bbls. per day according to reports released by supervising Umpire A. B. Capers of the district.

These major purchaser and pipe line companies are paying Mid-Continent posted prices for the East Texas oil.

East Central Texas

Daily average production week ending May 23:

Boggy Creek	2,512
Cedar Creek	36
Currie	265
Hill County	30
Mexia	3,329
Nigger Creek	123
Powell	4,342
Richland	117
Van	45,519
Wortham	469
Total East Central Texas	56,742
Kilgore	124,254
Lathrop	61,512
Joiner	118,000
Total	303,762
Total East Central Texas	360,504
Week ended May 16	311,647
Increase	48,857

Production Extended

Cranfill & Reynolds' No. 1 Susan Scott in the David Dainwood, 2½ miles southeast of the Sinclair Oil & Gas Co.'s No. 1 Cole, and in the direction of Kilgore is another completed producer this week that extends production and helps to draw the link still nearer in the Kilgore and Lathrop areas. This well also extends production farther west than anticipated, many believing that the water line was near to its location.

Walker & Harrison's No. 1 Walker in the Martha Dillard Survey, west of Gladewater in Gregg County, near the Smith County line, is evidently a defining well on the western side of the Lathrop and Gladewater areas. It cored to a total depth of 3,589 feet, the last core, from 3,587-89 feet, showing dry sandy shale and sand with volcanic ash. Elevation is 257 feet, making a minus datum of 3,318 feet or 13 feet lower than the Selby Oil & Gas Co.'s No. 1 Snavely, which is a little over 1 mile to the southeast of it. A drill stem was to be made.

Owen & Sloan's No. 1-B or No. 2 Starnes in northeastern Smith County, in the S. Epps Survey, which has been an exceptionally interesting test, is another one which looks discouraging to the owners as it is standing with hole bottomed at 3,403 feet or 98 feet lower than the Selby-Snavely well in Gregg County. It cored gray shale from 3,759-64 feet.

Another outpost test in the Lathrop area is Gulf Production Co.'s No. 1 Shepperd in the George R. Rains Survey, at least 2 miles from the nearest production. It had 1 foot of saturated sand, shale and hard tight sand from 3,541-46 feet, and proves another extension and linking producer for the area. Top of the sand runs 31 feet higher than the Selby Oil & Gas Co.'s No. 1 Snavely, 2 miles to the west.

East Texas Refining Co.'s No. 1 Tyiska in the R. Wilson Survey, eastern Smith County, is another extension producer for that county, as it came in making 260 bbls. the first 30 minutes through casing. It is approximately 2 miles north of Sinclair Oil & Gas Co.'s No. 2 Mayfield, the nearest producer, and proves up several hundred more acres to production in Smith County. Sand was cored from 3,833-45 feet, the latter being the total depth of the hole. It is also a 2-mile western extension to the Overton sector of the Joiner Pool.

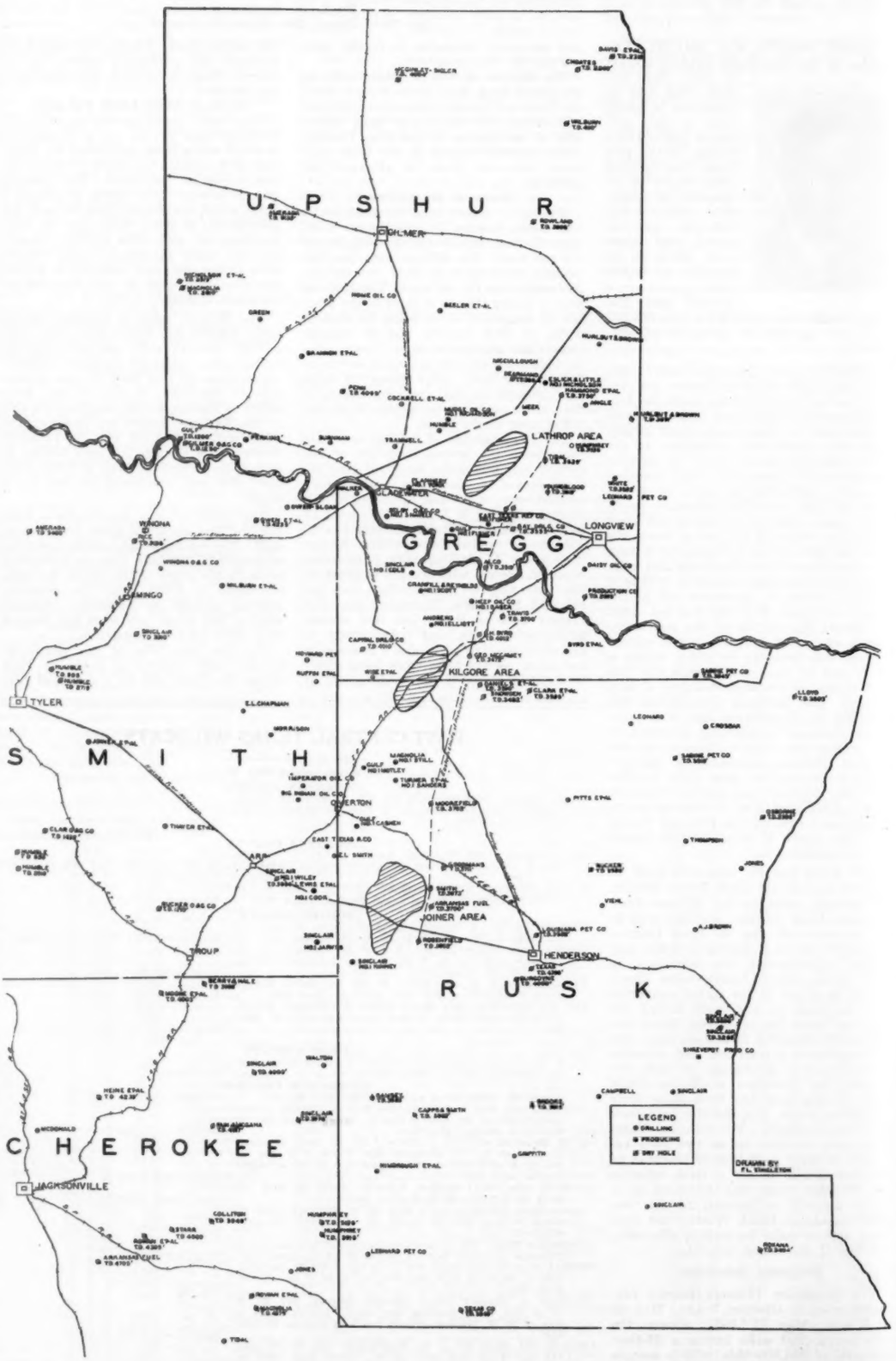
Dry Hole in Harrison County

Harrison County received another dry hole this week when Rowan & Nichols and the Tidal Oil Co.'s No. 1 Bussey estate, in the E. A. Merchants Survey, was shut down at 3,550 feet in Georgetown lime preparing to plug and abandon. It encountered no Woodbine section. This test is about 9 miles northwest of Hallsville.

Big Overproduction

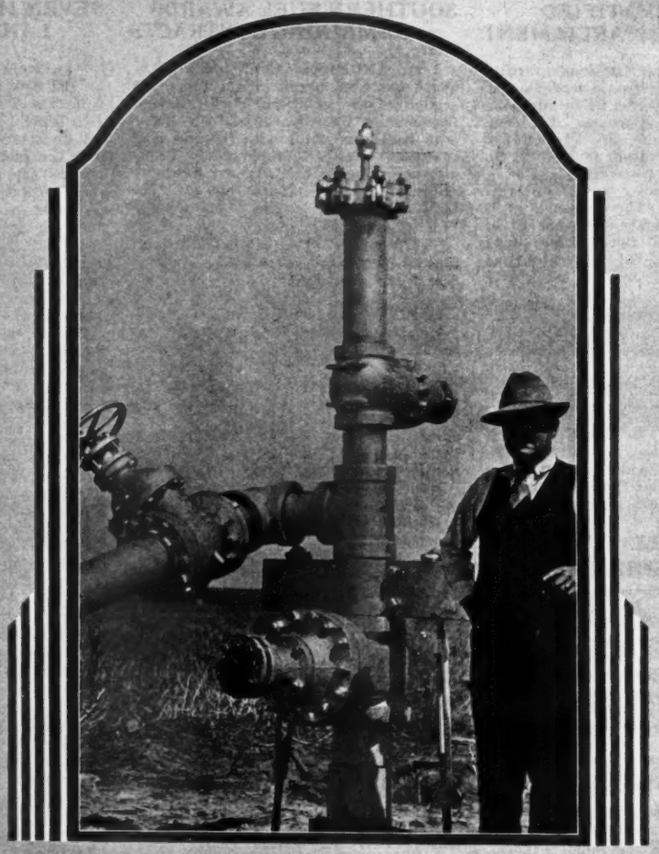
The total allowance for the Lathrop area, Gregg County, since proration went into effect, or for the first 15 days of May, was 586,077 bbls. Pipe line runs for the same period amounted to 828,405 bbls., resulting in an overage of 242,328 bbls. in that period. However there is a net shortage of 75,249 bbls. and the umpire will allow this to be made up as soon as all connections have been made. This was the first area in the district to be prorated. The Arkansas Fuel Oil Co., Atlas Pipe Line Co., Cranfill & Reynolds Pipe Line, East Texas Refining Co., Illinois Pipe Line Co., Pilot Oil Co., Magnolia Pipe Line Co., Macmillan Petroleum Co., and Shell Petroleum Co. are the companies having lines in the field and running oil. The Texas Pacific Coal & Oil Co. is building a line and rack into

(Continued on Page 82)



—Base map by courtesy of Zingery Oil Map Co.

Map of the East Texas district showing the main bodies of the producing areas, extension and outpost producers, dry holes which have limited production, and other dry holes throughout the counties, and wildcat drilling wells. Arterial highways and railroads serving the towns which are the centers of activities are also shown.



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Pipe Line Construction News

NORTH CENTRAL PUSHING WORK ON ITS SYSTEM

CASPER, Wyo., May 23.—The North Central Gas Co. is pushing construction on its distribution system for natural gas from central Wyoming to eastern Wyoming and western Nebraska. It expects to have the system in operation by September 1, 1931.

Work has been started on the booster station at Casper. The stations at Teapot and Poison Spider are being dismantled and the machinery moved to the new station near the refinery of the White Eagle Oil & Refining Co., east of Casper. One 10-inch line across the North Platte River has been completed.

The New York Oil Co. and the North Central Gas Co. for the present, will get their gas from the Producers & Refiners Corp. at Big Sand Draw and Muskrat which will be moved through the New York's lines to Glenrock where it will be taken by the North Central and its leased line from the Stanolind Pipe Line Co., formerly the Sinclair pipe line. Laterals will be run from the old Sinclair line to the various towns.

The North Central Gas Co. and the New York Oil Co. have practically the same executives and operating organizations. J. M. McIntire is vice president and general manager of the North Central as well as the New York company. L. L. Langworthy is general superintendent in charge of operations of both systems. Mr. Langworthy was formerly in the pipe line department of the Midwest Refining Co. Albert Parks is chief engineer for both companies. Miss Julia E. Mayes, secretary to Mr. McIntire, is secretary for both companies. R. E. Burke will be general auditor for both companies. L. C. Krueger will be transmission superintendent for both companies. A. C. Harrison will be in charge of the booster station at Casper, and V. A. Houston, with headquarters at Scottsbluff, will be distribution superintendent in charge of distribution.

C. A. Dow, of Sheridan, has been placed in charge of the system at Douglas; Col. E. A. Froyd, of Midwest, at Torrington and Lingle. W. H. O'Keefe, of Casper, at Guernsey and Fort Laramie; L. U. Fuerhrer, formerly with the New York Oil Co. in Casper, at Morrill and Henry, Neb.; A. P. Donnelly, formerly with the New York company in Casper, at Mitchell, Neb.; H. Tanner, at Gering, Neb.; K. C. Smith, formerly with the Midwest Refining Co., at Bridgeport and Northport, Neb.; George Brown, at Bayard, Neb.; J. W. Walker, formerly with the New York company, at Scottsbluff, Neb.; and V. R. Moss will be in charge at Minatare, Neb.

SUN PIPE LINE CONTRACT

PITTSBURGH, Pa., May 25.—Sun Oil Co. has ordered 198 miles of seamless 10¾-inch outside diameter for its oil line in Texas, from Jones & Laughlin Steel Corp., amounting to about 20,000 tons.

LANCE CREEK-LUSK LINE

Frank Bautch of Lusk, Wyo., has been asking for bids for laying pipe line for gas from the Lance Creek oil field in eastern Wyoming to Lusk. The line would be about 20 miles long and will be either of 4-inch or 6-inch pipe.

LINE TO CLEAR LAKE

HOUSTON, Tex., May 25.—Gulf Pipe Line Co. is laying 5½ miles of 6-inch pipe from a connection on its line between Big Creek and Blue Ridge to the Clear Lake Field, Fort Bend County.

AGREEMENT RATIFIED BY IRAQ PARLIAMENT

The Parliament of Iraq has ratified the agreement with Iraq Petroleum Co. which was signed March 24 by Sir John Cadman and Iraq ministers. The company agrees to build a pipe line by 1935 from Kirkuk, branching at Haditha to Haifa and Tripoli, respectively, some 1,200 miles, at estimated cost of £10,000,000 to £12,000,000. The concession gives the company sole rights over part of the provinces of Mosul and Bagdad, lying east of the Tigris, for 70 years from 1925, after which it will be taken over by the government.

In the Iraq Petroleum Co., Ltd., the Anglo-Persian Oil Co., Royal Dutch-Shell group, a French group and an American group hold a 23¾ per cent interest each, C. S. Gulbenkian holding the 5 per cent remaining interest. The American interest is owned through the Near East Development Corp., in which Standard Oil Co. of New Jersey, Standard Oil Co. of New York, Pan American Petroleum & Transport Co., Gulf Oil Corp. and Atlantic Refining Co. are represented.

SINCLAIR WILL TUNNEL UNDER SHIP CHANNEL

HOUSTON, Tex., May 25.—The Sinclair Texas Pipe Line Co., a subsidiary of the Sinclair Consolidated Oil Corp., obtained permission to tunnel underneath the Houston Ship Channel at Sinco, the Sinclair refinery base just outside of Houston on the La Porte Road, for the purpose of running pipe lines to the refinery.

The tunnel will be 8 feet square and concreted. The estimated cost runs between $100,000 and $125,000. The work is expected to be completed and the tunnel and pipe lines completed in 90 days.

At the same time the Sinclair Texas Pipe Line Co.'s 12-inch oil line will be completed from Huffman, near Hull, to the refinery ready to run oil. At Huffman the 12-inch line will connect with lines from the East Texas oil fields, where the Sinclair interests have extensive leases and production.

The plans specify construction of the tunnel not less than 60 feet below mean low tide. The tunnel will be approximately 600 feet in length. It is the first pipe line tunnel under the Houston Ship Channel. Other pipe lines crossing the channel are trenched across at an average depth of 45 feet.

TO EXTEND IDAHO SYSTEM

BOISE, Idaho, May 23.—The Idaho Supreme Court has upheld an order to the State Public Utilities Commission, granting a certificate of necessity and convenience to L. B. Denning and John McFayden, representing the Western Public Service Corp., which is affiliated with the Mountain Fuel Supply Co. and Ohio Oil Co. These interests obtain gas production in southwestern Wyoming and northwestern Colorado and pipe it and distribute it in northern Utah. Early in 1930 these interests sought to include southeastern Idaho in their system, and were granted permission, with the proposed limit of extension to Pocatello, Idaho. The Public Utilities Consolidated Corp. of that city protested and the matter has been in litigation. The plan now is to increase the pipe line and distribution system to include most of northern Utah and southeastern Idaho as far north as Pocatello. Officials of the company estimate that such extensions will cost in excess of $3,000,000. No date has been set for the commencement of the construction work, but it is anticipated that it will be in the near future.

SOUTHERN FUEL AWARDS REMAINING CONTRACTS

LOS ANGELES, Calif., May 23.—Work has been begun on the remaining section of the Southern Fuel Co.'s gas transmission line connecting Long Beach with Kettleman Hills with the award of contracts totaling approximately $800,000, according to F. B. Lewis, first vice president of the Southern Fuel Co. The total cost of the line is approximately $7,000,000.

The project involves 210 miles of steel pipe 26 inches in diameter. The first section from Long Beach to San Fernando has been laid. Contracts just awarded are with the combined firms of Macco Construction Co. and Robertson, who will handle the second section from San Fernando to Castiac, 31½ miles, and the fourth section from Grapevine to Kettleman Hills, 108 miles. The intervening section from Castiac to Grapevine, 40½ miles, was awarded to the combined firms of Lang Transportation Co. and Southern California Construction Co.

Both contracts call for completion of the work on November 1 and involve all operations of ditching, welding, laying and back filling.

Mr. Lewis also announced that contracts have been made by the Southern Fuel Co. with various operators at Kettleman Hills for the gas supply, which will be conveyed by the new line to southern California, where it will feed into the systems of the Southern California Gas Co. and the Southern Counties Gas Co. and leading directly to the steam station of the Southern California Edison Co. at Long Beach. The producers entering into these contracts are Pacific Western Oil Co., General Petroleum Co., Superior Oil Co., Union Oil Co. and Kettleman Hills Oil Corp.

CHARTER IS GRANTED KEYSTONE PIPE LINE

HARRISBURG, Pa., May 25.—The state department has granted a charter to the Keystone Pipe Line Co., Philadelphia, incorporated for the purpose of transporting petroleum products from Point Breeze, near Philadelphia, across Pennsylvania.

The pipe lines would extend to the New York and Ohio state lines via Allentown, Reading, Scranton and Lancaster, Lebanon, Harrisburg and Carlisle. The pipe lines east of Carlisle will be laid first and later those west of Carlisle, according to the company's plans.

The company is incorporated for $100,000 and R. C. Tuttle, Overbrook, is treasurer. Other incorporators are J. W. Vandyke and W. M. Irish, of the Atlantic Refining Co., Philadelphia.

At a hearing on its application for approval of incorporation before the public service commission, the company stated it did not plan to transport natural or manufactured gas through its pipe lines, confining its operations to transportation of petroleum products and petroleum.

GREAT LAKES LINE

MINNEAPOLIS, Minn., May 25.—Great Lakes Pipe Line Co. has completed its gasoline line via Des Moines from Oklahoma to the Twin Cities. Work remains to be done on a 25-mile section swinging around St. Paul to the east to reach a 60-acre terminal track north of Minneapolis.

First construction on the site includes combined field office, laboratory and ethyl blending plant; four 82,000-bbl. steel tanks and three 30,000-bbl. tanks, all of the floating roof type. Marry Moreland of Kansas City, vice president and general manager, said the Minneapolis terminal will be operating by July 1.

SEVEN HUNDRED MILES LAID BY CONTINENTAL

Approximately 700 miles of pipe line on the 950-mile natural gas line project from the Texas Panhandle, to Chicago, Ill., being constructed by the Continental Construction Co. has been laid. The last contracts were let more than two months ago and work is in progress on the contract from the Mississippi River to Joliet a distance of 155 miles. At Joliet the line will connect with the Chicago belt distribution system, which serves greater Chicago and adjoining territory. A hundred miles of gathering lines are under construction in the Texas Panhandle.

Active work on the line started in September, 1930, to supply natural gas to industrial and domestic markets in Chicago and along the right of way. With the completion of the line it will be operated by the Natural Gas Pipe Line Co. of America. The line is 24 inches in diameter all the way from the Texas Panhandle to Joliet, and when finished will cost approximately $70,000,000.

The Continental Construction Co. is jointly owned by eight large companies. The Texas Company, Cities Service Co., Standard Oil Co. of New Jersey, Insull & Sons, Skelly Oil Co., Phillips Petroleum Co., Columbian Carbon Co., and Southwestern Development Co., which is owned jointly by the Prairie Oil & Gas Co. and Producers & Refiners Corp.

A multiple pipe line installation across the Missouri River has been completed under the supervision of a representative of the War Department, under whose jurisdiction the work must be handled. Another similar type of river crossing is under construction on the Mississippi River, south of Davenport, Iowa, and near Muscatine, Iowa.

There are to be 10 main line compressors on the 24-inch main line system. The initial main line station at Fritch, in southwestern Hutchinson County, Texas, on the Rock Island Railroad, is the largest of its type ever constructed. The main building will house twelve 1,250-horsepower compressors. The other nine stations will be equipped with five 1,250-horsepower units.

The entire project is expected to be completed by July 1, unless weather conditions or other obstacles interfere.

T. P.'S NEW PIPE LINE

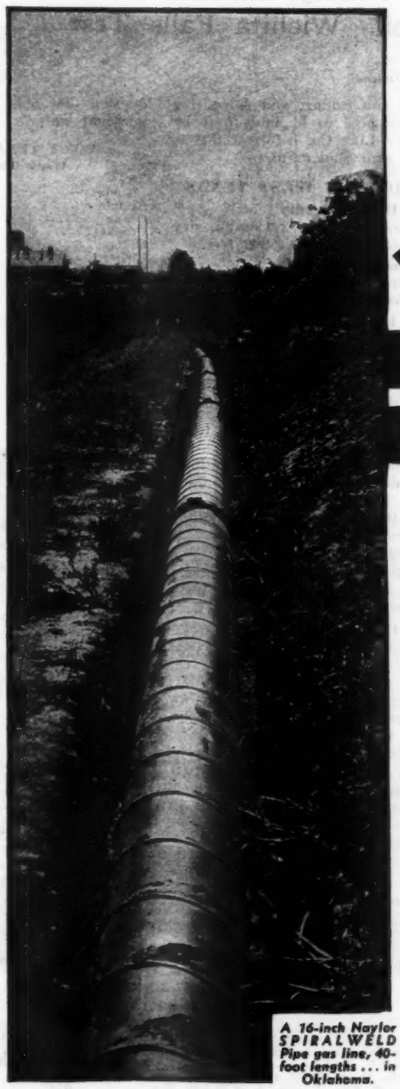
FORT WORTH, Tex., May 23.—The Texas Pacific Coal & Oil Co. is laying 5,700 feet of 4-inch oil pipe line from its well near Gladewater, Gregg County, to a loading rack in the course of construction on the Texas & Pacific Railroad in the George Thomasen Survey. The crude oil will be shipped from there to the company's Fort Worth refinery by tank car.

SHORT KETTLEMAN LINE

LOS ANGELES, Calif., May 23.—The Union Oil Co. of California has started the construction of a new 7-mile 6-inch welded pipe line from Kettleman Hills to its Tar Canyon pump station to facilitate transportation of crude from Kettleman Hills to Coalinga for the Shell and Associated Oil companies. The construction work will be completed on or about June 1.

PIPE FOR LEWISTOWN LINE

Lewistown Natural Gas Co. of Lewistown, Mont., announced it is expecting delivery on five carloads of pipe for its gas line to the city from nearby gas structures. The company holds franchises in Lewistown, Moore, Hobson, Harlowton and Stanford.



A 16-inch Naylor SPIRALWELD Pipe gas line, 40-foot lengths ... in Oklahoma.

THE NAYLOR WELD

AN EXPLANATION OF ITS DISTINCTIVE CHARACTER

NAYLOR SPIRALWELD Pipe has the largest weld area and bond in proportion to its normal wall thickness ever produced in a pipe.

● The principal function of the Naylor WELD is to seal the pipe leak-tight. It is the only weld that is not required to hold the pipe in formation... Naylor makes a substantial lock-seam tube structure before the weld is applied. Moreover, expansion and contraction strains are not taken up by the Naylor WELD. This frees the weld from fatigue to which a weld is subjected in other pipe structures.

● Naylor SPIRALWELD Pipe is also distinctively different from other pipe in STRUCTURE. It is the only pipe made with a continuous, electrically-welded spiral lock-seam truss... a unique structure which makes Naylor SPIRALWELD pipe strong, light weight, mechanically right and flexible throughout each length.

● Moreover, Naylor SPIRALWELD Pipe is made of Toncan Iron, an alloy of iron, copper and molybdenum which greatly prolongs the life of the pipe. Write our nearest office for additional data on the dependability and economy of Naylor SPIRALWELD Pipe.

TRADE MARK

NAYLORPIPE

PIPE CARRIED IN STOCK AT CHICAGO, HOUSTON AND LOS ANGELES

NAYLOR PIPE COMPANY

Main Office & Plant, 1230 East 92nd Street, Chicago

SALES OFFICES

NEW YORK
3116 Chrysler Building

PHILADELPHIA
Witherspoon Building

TULSA
507 Philtower Building

HOUSTON
2301 Commerce Street

FT. WORTH: 402 Petroleum Building

LOS ANGELES: Champion & Barber, Inc., 576 Subway Terminal Building., Exclusive Distributors: California, Nevada and Arizona

MONTREAL, CANADA: Mechanical Equipment Company, 660 St. Catherine St., West

VANCOUVER, B. C.: Gordon & Belyea, Ltd., 101 Powell Street

MEXICO: C. H. Elstner, Apartado 284 Monterrey N. L.

May Join Shipley and Bennett Pools

Two Tests Extend Barker Area in Ward County. Increase in Sulphur Water in Southwestern Pecos Well. Wichita Falls Test

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., May 25.—Bradford and others' No. 1 Carson, in Section 26, Block 5, H.&T.C. Survey, Ward County, a northeast extension of the Barker area, which lies between the Shipley and Bennett area, is now shut down connecting with storage after encountering 3,000,000 feet of gas from 2,135-45 feet and an increase with a light spray of oil at 2,147 feet. This proves about another section or more of acreage good for production.

Simms Oil Co.'s No. 1 Himmell, 330 feet from the northeast and 2,310 feet from the southeast lines of Section 30, Block B-9, P.S.L. Survey, approximately three-quarters of a mile southeast of the Texas Pacific Coal & Oil Co.'s No. 1 Barker, also extended this area, but in the opposite direction. The first oil was logged at 2,245-75 feet with an increase in oil and a little gas at 2,295 feet where the tools were blown up the hole and stuck. The tools were later fished out and the hole drilled to 2,356 feet, the present total depth, from which the well produced around 134 bbls. daily. An increase in oil was encountered at 2,324 feet.

These two extensions lend strength to the belief that the Shipley and Bennett Pools will be connected by the Barker extension.

Loving County Test

Lewis and Slagel's No. 1 Cartwright, in Section 1, Block 57, T.&P. Survey, northwestern Loving County, was to be shot, but no result of shot or confirmation of it has been received. It was plugged back from 3,174 feet where it continued to show some water. If this test proves a producer it will open up the second Delaware Pool for Loving County, and may extend the production over into New Mexico as it is almost on the New Mexico state line.

Big Lake Oil Co.'s No. 5-C University, in Reagan County, the well which was killed a short time ago in order to deepen, is now shut down at a total depth of 8,806 feet where it is being cleaned out to make a test and gauge its capacity. It was killed on May 7 to deepen, and was averaging 2,012 bbls. before being killed.

Southwestern Pecos County

Penn Oil Co. and others' No. 1 Alvis, in Section 156, Block 3, T.&P. Survey, southwestern Pecos County, encountered another increase in sulphur water from 3,605-18 feet and is drilling with a hole almost full of water, appearing to be nothing more than a "duster" regardless of the small show of oil and gas through water at 3,602 feet. This will be the third dry hole for this area, the Humble Oil & Refining Co. having recently abandoned one in the vicinity of this test, and the Pure Oil Co. now having one shut down at a total depth of 5,000 feet waiting on orders. All three tests were interesting, especially the test of the Pure Oil Co. as it was located on a large high which was believed might prove productive. Pecos County has been a "graveyard" of dry holes on "highs."

West Texas production decreased over 5,300 bbls. per day this week, and production in the Panhandle district decreased over 2,000 bbls. per day, but these decreases are mere drops in the bucket in comparison to the increases registered in production in the East Texas Field, and proration in the rest of Texas is as so much chaff in helping to solve the overproduction situation if the East Texas district continues to produce as it is at the present time.

WICHITA FALLS DISTRICT

Deep Oil Development Co.'s No. 1 Munger, the deep test a mile north of Kemp City in Wichita County, has cleaned out the hole and run tubing, and is waiting on 2 miles of pipe to be laid to it by the Pure Pipe Line Co. before a test is made by the proration umpire.

COMPLETIONS IN WEST TEXAS

Borden County

George Goodwin's No. 2 Conrad, dry and abandoned, total depth 800 feet.

Culberson County

Cranfill Brothers' No. 1 Seay, total depth 2,430 feet, completed as water well.

Fisher County

Cranfill & Reynolds' No. 2 Flanagan, initial production 28 bbls., total depth 3,800 feet.

Jones County

B. A. Duffy's No. 1 Chittum, oil sand 2,094-2,101 feet, dry and abandoned, total depth 2,110 feet.

Hardly Able Oil Co.'s No. 1 Butler, dry and abandoned, total depth 2,605 feet.

Ungren & Frazier's No. 1 King, oil sand 1,993-2,006 feet, initial production 650 bbls., total depth 2,006 feet.

Howard County

Magnolia Petroleum Co.'s No. 6 Sarah Hyman, top pay 1,608 feet, initial production 25 bbls., total depth 1,699 feet.

Loving County

West Texas Petroleum Corp.'s No. 1 Salsbury, top salt 890 feet, top Delaware sand 4,344 feet, initial production 130 bbls., total depth 4,403 feet.

Hoffman and others' No. 1 Wheat-Ramsey, top Delaware sand 4,238 feet, initial production 570 bbls., total depth 4,245 feet.

Sterling County

Beesley and others' No. 1 Foster, dry and abandoned, total depth 2,301 feet.

Winkler County

Lion Oil Co.'s No. 10-A Hendricks (recompletions), old total depth 2,791 feet, new total depth 2,991 feet, initial production 300 bbls. oil per day, plus 65 per cent water.

WEST TEXAS PRODUCTION
Week Ending May 23

County—	No. wells	Bbls.
Andrews	3	0
Crane	377	18,578
Crockett	51	1,541
Ector	78	6,759
Fisher	11	687
Garza		20
Howard-Glasscock	539	28,987
Irion	9	47
Jones	80	1,311
Loving	39	3,330
Mitchell	111	1,925
Pecos	546	72,684
Reagan	255	18,488
Runnels	5	86
Scurry	5	0
Upton	261	5,334
Taylor	3	101
Ward	57	3,539
Winkler	595	44,433
Total production this week		207,850
Total production last week		213,168
Decrease		5,318

COMPLETIONS IN RANGER DISTRICT

Callahan County

Guffey and others' No. 1 Finley, gas sand 661-76 feet, initial production 802,000 feet of gas with 200 pounds rock pressure, total depth 676 feet.

Coleman County

Arcadia Refining Co.'s No. 1 Burkett, oil sand 1,612-16 feet, initial production 280 bbls. flowing, total depth 1,616 feet. Jameson, Pollard and Forster's No. 1 Golson, oil sand 1,614-26 feet, initial production 205 bbls. flowing, total depth 1,626 feet. Prairie Oil & Gas Co.'s No. 1 Webb, gas sand 1,502-08 feet, initial production 11,687,000 feet of gas with 480 pounds of rock pressure, total depth 1,508 feet. Snooks and Mitcham's No. 1 Henderson, gas sand 720-730 feet, initial production 100,000 feet of gas, total

(Continued on Page 115)

WILDCAT OPERATIONS IN WEST TEXAS

Week Ended May 23

Company, well, farm name, section and block—	Remarks—
ANDREWS COUNTY	
Deep Rock Oil Co. et al's No. 1 Kuykendall, 2,310 ft. from N and E of SW cor. Sec. 24, School Blk. A-46.	Shut down; total depth 4,648 ft.
BREWSTER COUNTY	
Brewster Oil Co.'s No. 1 fee, 2,640 ft. S and 2,598 ft. E of NW cor. Sec. 45, Blk. G-15, G.C.&S.F. Sur.	Shut down 1,935 ft.
E. L. Chapman's No. 1 Skinner, C SW SE Sec. 100, Blk. 2, G.C.&S.F. Sur.	Shut down 1,302 ft.
Trans-Pecos Oil & Gas Co.'s No. 1 Jones, 930 ft. from N and 2,500 ft. from E of Sec. 18, Blk. G-15, G.C.& S.F. Sur.	Shut down 2,820 ft.
Van McPhail's No. 1 McIntyre, SE cor. Sec. 59, Blk. 352, 7 miles S of Alpine	Shut down 1,750 ft.
COKE COUNTY	
Reed, Hitchens et al's No. 1 Duncan, 1,980 ft. from S and 1,680 ft. from E of Sec. 239, Blk. 2, H.&T.C. Sur. (4,500-ft. cable test)	Shut down 30 ft.
CONCHO COUNTY	
Beesley et al's No. 1 Waring Estate, 400 ft. from N and E Sec. 163, T.&N.O. Sur.	Shut down 267 ft.
Betts & Dennis' No. 1 H. E. Woods, 710 ft. from E and 150 ft. from S Sec. 3, H.E.&W.T. Sur.	Shut down 80 ft.
Turner et al's No. 1 Borsig, 150 ft. from S of NE cor. G. Emmig Sur. 130, 6 miles W of Paint Rock	Shut down 1,850 ft.
CRANE COUNTY	
Cranfill Bros. and Gulf's No. 1 J. B. Tubb, 2,310 ft. from N and 330 ft. from E of Sec. 8, Blk. B-37, Public School Land	Total depth 5,336 ft.; fishing for swedge.
E. H. Sides and others' No. 1 B. P. Nolen, 150 ft. from S and 160 ft. from W of N 160 acres, Sec. 8, Blk. 31, H.&T.C. Sur.	Shut down 740 ft.
CROCKETT COUNTY	
Doleman & Moore's No. 1 Perner, 3,135 ft. from N and 1,485 ft. from E of Sec. 36, Blk. 2, I.&G.N. Sur.	Spudded and shut down.
CULBERSON COUNTY	
Kornrumpf et al's No. 1 Garren, 330 ft. S and W Sec. 15, Blk. 79, Public School Land	Shut down 1,280 ft.
DAWSON COUNTY	
Albaugh et al's No. 1 Robinson, C NW Sec. 46, Blk. M, E.L.&R.R. Sur.	Spudded 20 ft. and shut down.
ECTOR COUNTY	
Galt, Brown & Penn's No. 1 Cowden, C SE Sec. 13, Blk. 44, Twp. 2s, T.&P. Sur.	Shut down 3,860 ft.
H. F. Wurtz' No. 1 E. A. Ibbetson et al, 330 ft. from N and E lines of NW Sec. 16, Blk. 46, Twp. 3s, G.M. M.Br.&A. Sur.	Shut down 3,275 ft.
EL PASO COUNTY	
Lane-The Texas Company's No. 1 Malone, 2,110 ft. from SW and NW of Sec. 46, J. M. Day Sur.	Shut down 3,089 ft.

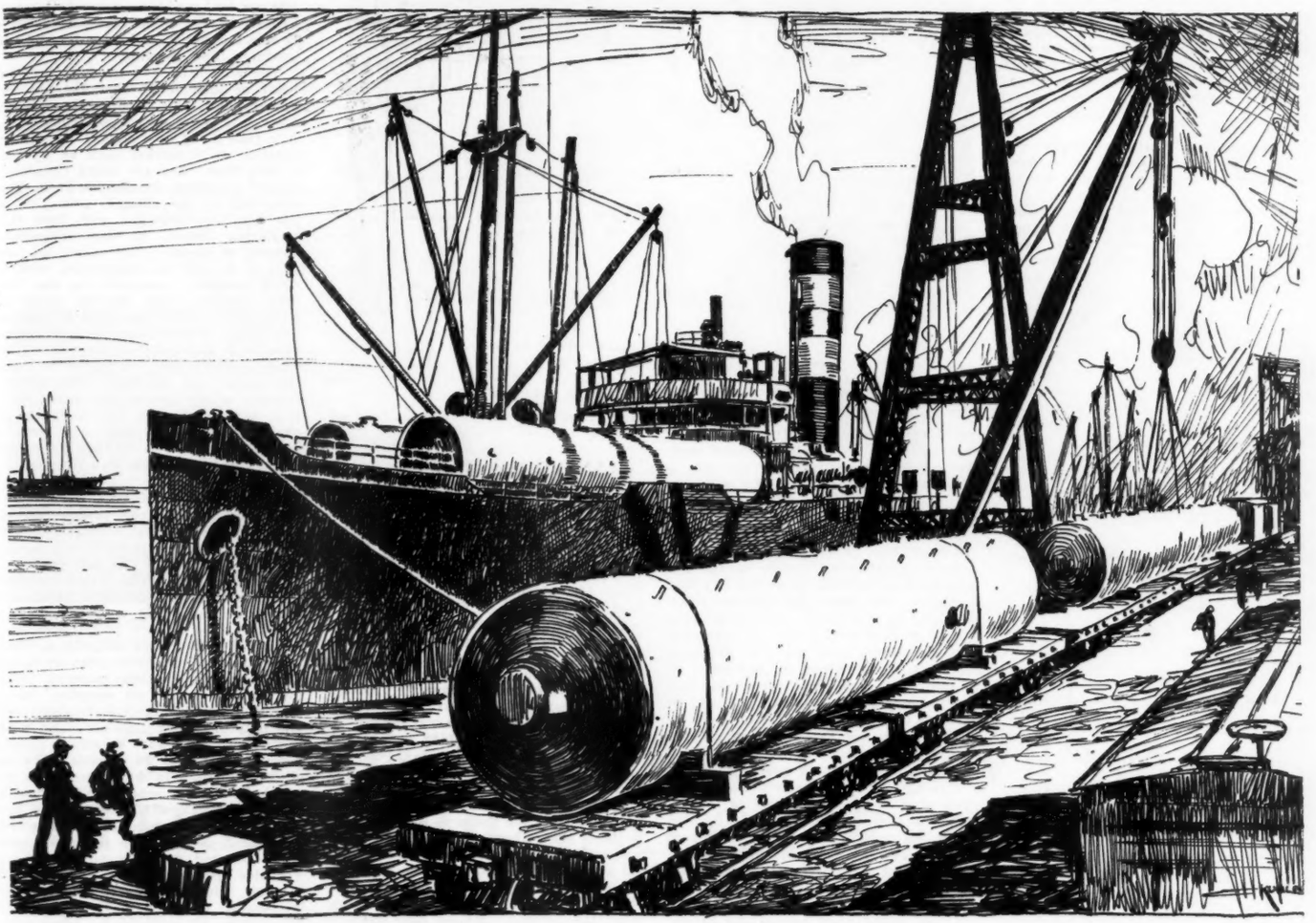
(Continued on Page 88)

WILDCAT OPERATIONS IN TEXAS PANHANDLE

Week Ending May 23

Company, well, farm name, section and block—	Remarks:
CARSON COUNTY	
Deep Lake Oil Co.'s No. 1 Keys, NE cor. SW, Sec. 1, Blk. 4, I.&G.N. Sur.	Drlg. 1,708 ft.
El Paso-Amarillo O. & G. Co.'s No. 1 Chapman, 594 ft. S, 1,458 ft. E, Sec. 7, Blk. 3, A.B.&M. Sur.	Rig.
Red River Gas Co.'s No. 1-A Bennett, 660 ft. N, 660 ft. W, NW, Sec. 2, Blk. 5, B.&B. Sur.	Rigging up.
The Texas Co.'s No. 1 Bednarz, 817 ft. S, 172 ft. W, S 100 ac. of SW, Sec. 2, Blk. 4, I.&G.N. Sur.	Drlg. 2,632 ft; 17,500,000 ft. gas 2,671-75 ft.
CHILDRESS COUNTY	
C. L. Sloan et al's No. 1 B. P. Smith, Sec. 49, F. P. Knott lands	T.D. 5,000 ft.
COLLINGSWORTH COUNTY	
Dixon et al's No. 1 Bell, 330 ft. N, 1,320 ft. W, Sec. 103, Blk. 21, H.&G.N. Sur.	S.D. 1,992 ft.
COTTLE COUNTY	
Darby Oil Co. and Merry Bros. & Perrin's No. 1 Richards, 330 ft. NE, Sec. 13, B.S.&F. Sur.	S.D. 4,400 ft.
GRAY COUNTY	
Anderson et al's No. 2 Vollmert, 330 ft. N and W, SW, Sec. 140, Blk. 3, I.&G.N. Sur.	Rig.
Boyles et al's No. 1 Colebank-Morse, 330 ft. NE, Sec. 65, Blk. 25, H.&G.N. Sur.	Spudded and S.D.
Brown et al's No. 1 Duncan, 330 ft. S and E, NW, Sec. 93, Blk. 3, I.&G.N. Sur.	S.D. 990 ft.
Cree Hoover & Traham's No. 1 Delmar, 330 ft. S line, 330 ft. W line, NW, Sec. 105, Blk. 3, I.&G.N. Sur.	Drlg. 2,425 ft.
Danciger O. & R. Co.'s No. 1 Barrett, NW cor. S½ NE, Sec. 138, Blk. 3, I.&G.N. Sur.	T.D. 3,365 ft; plugged back 3,335 ft; testing; top pay 3,175 ft.
Danciger O. & R. Co.'s No. 1-B Barrett, SW cor. N½ NE, Sec. 138, Blk. 3, I.&G.N. Sur.	Standardizing 3,045 ft.
Danciger O. & R. Co.'s No. 1 Barnett, 231 ft. S, 330 ft. W, E½ of N 56 ac., Sec. 136, Blk. 3, I.&G.N. Sur.	5,000,000 ft. gas 3,097 ft; S.D. 3,180 ft.
Jean Pet. Co.'s No. 1 Furneaux Bros., 330 ft. N and W, cor. SE, Sec. 200, Blk. B-2, H.&G.N. Sur.	S.D. 2,770 ft; P.B. 2,430 ft. and shot with 80 qts. 2,409-30 ft.
Interstate Prod. Co.'s No. 1 Frazier, C of W 100 ac., of SW, Sec. 177, Blk. 3	Drlg. 675 ft.
Nelson et al's No. 1 Crews, 330 ft. S and E, NW, Sec. 12, Blk. 25, H.&G.N. Sur.	S.D. 2,619 ft.
Operators Royalty & Prod. Co.'s No. 2 Vanniman, 330 ft. S and W, E½ NE, Sec. 175, Blk. 3, I.&G.N. Sur.	Fishing; T.D. 2,915 ft.
Sanders et al's No. 1 Wright, 330 ft. S, 114 ft. E, Sec. 12, Blk. 3, I.&G.N. Sur.	S.D. 2,788 ft; swbng. 10 bbls. per hour; may shoot.
Steckoll & Reiger's No. 1 Davidson, 660 ft. N and W, Sec. 64, Blk. B-2, H.&G.N. Sur.	S.D. 765 ft.

(Continued on Page 87)



LOADING four Kellogg bubble towers on one of a fleet of eight ships which were chartered by Kellogg to transport the equipment for a large foreign refinery. The towers were carried on deck. Instruments, pumps, castings, structural steel and other equipment were carried in the holds.

The M. W. KELLOGG CO.

225 Broadway, New York

LOS ANGELES, 1031 SO. BROADWAY

TULSA, PHILTOWER BUILDING

BENDING FORCE AFFECTS THREADED TOOL JOINTS

(Continued from Page 14)

quite a big torque in the string as a whole.

The unscrewing of the joints in a string of drill pipe has actually been observed in a number of instances. The writer's attention was first called to this matter by H. W. Fletcher, chief engineer with the Hughes Tool Works, Houston, Tex. That company has carried out an extended series of experiments both in the field and the shops and developed a mass of information and observational data that in the writer's opinion is of great interest.

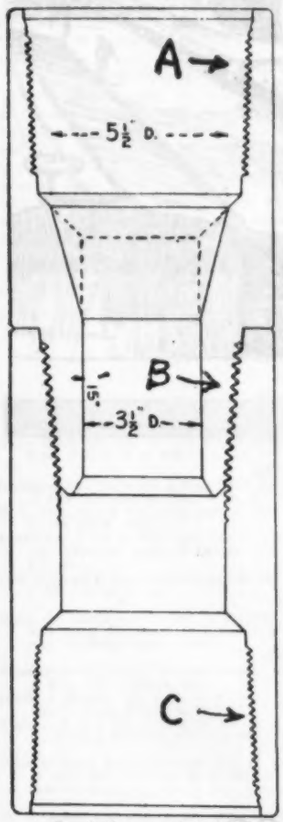
Suggestions Worthy of Study

The following suggestions are offered as worthy of consideration and further study:

1. Screwed joints with the pin pointing up should be avoided as far as possible in the drilling string. Such joints are found under each tool joint and on some bits and drilling tools. To do away with them on the drill pipe would require a radical change in the method of manufacture, and the forming of a female thread on one end of each joint. On the top of a short fishtail bit the arrangement of the joint with the pin pointing up probably does not matter much, but such joints on top of core barrels, reamers, or long drill collars are a possible hazard.

2. Joints with the pin pointing upward should be made up firmly before being used in the string. An accurately

FIG 4



Standard type of tool joint.

manufactured joint, made up really tight, so that there is contact at both ends of the thread, and the material is elastically strained circumferentially, will not be liable, when subjected to bending forces, to prize open and develop the slight clearance necessary to produce the differential driving action under discussion. It is now customary to make the tool joints up on the pipe in the shop, experience having taught the importance of this procedure.

3. The taper of the two mating parts of a joint should correspond within very close limits, so that the joint will make up at both ends at the same time, and lessen the possibility of play and of rocking about a tight cross section.

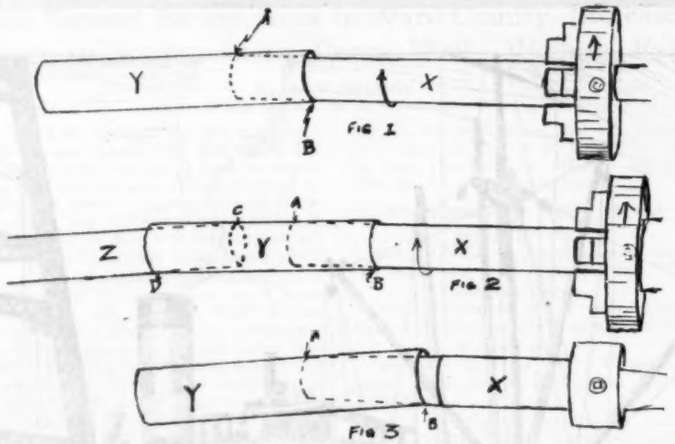
Another item of field equipment worth consideration from the point of view put forth in this paper is the wrist pin in the regular beam pumping rig. A.P.I. standards specify left-hand threads for this item and this has been general practice for forward running. If any play is present, then according to the argument outlined above, the pin will rotate faster than the crank web, which with forward running, will cause it to unscrew from a left-hand nut. This unscrewing is, of course, opposed by friction in the pitman bearing, but the writer believes that except in rare cases, the differential action tending to cause the pin to unscrew, will be more powerful than the opposing bearing couple, and that the left-hand thread is in fact wrong for this duty. Of course, if a right-hand thread is used and the bearing should seize, it would be liable to unscrew, but this is unlikely, as these bearings usually have plenty of play on the top side, and in any case, for the pin to come out would probably be the best thing that could happen under such circumstances. When, according to recent practice, pumping rigs are run backward, right-hand pins are often substituted for the standard pin, and the argument put forth here is that this practice is incorrect.

Results of Experiments

A few experiments carried out by the writer support the theory. At a pumping rig with a standard pin threaded left-hand, the nut was slacked back one turn and the pin loosened in the crank. Upon starting up and running forward the pin unscrewed from the nut at the rate of about 1 degree per 8 revolutions of the crank. This indicated that the left-hand thread does not prevent the pin from backing out, but as this rig could not be reversed, the converse, namely that a right-hand thread would be preferable, could not be demonstrated. Another test was, therefore, made on an electrically driven O.C.S. type rig with rotary counterbalance and a tapered, left-handed wrist pin. The well was 3,000 feet deep, pumping 20 strokes of 34 inches per minute with a 2½-inch pump. The nut was slacked off one turn and the rig started forward. The pin unscrewed froom the nut at the rate of 1 degree per 5 revolutions of the crank. After being allowed to unscrew 10 degrees, the rig was reversed, and it was found that the pin made up at the rate of about 1 degree per 8 revolutions. As this rotation relative to the nut takes place against the frictional drag of the pitman bearing, a plain babbitted bearing, in very poor condition, was purposely selected for the test.

It is therefore submitted that theory and experiment point to the conclusion that the practice of using left-hand pins for forward running, and right-hand for backward running, is incorrect. The matter is not of merely academic interest as accidents due to the unscrewing of the wrist pin at pumping rigs are quite frequent and usually result in considerable damage.

The question can only be finally settled by statistical methods and the comparison of records of the number of accidents experienced with pins threaded according to present practice, with those with pins threaded in the manner advocated above.



Diagrammatic sketch showing pipe in lathe chuck.

TRANSPORTATION OF NATURAL GASOLINE

(Continued from Page 18)

be considered as part of our motor fuel gasoline supply. If I were a small producer of natural gasoline at the present time, I would not sell my natural gasoline to a refinery at existing prices. I would make it into motor fuel. The larger manufacturers are tending toward this policy and it is the logical way to sell natural gasoline. The freight rate on natural represents so large a portion of its present value that it is almost impossible for the ordinary refiner to take natural to his plant by freight and use it as a blending material. On the other hand, it is comparatively simple to weather, or fractionate, natural gasoline to where it could be put direct into crude oil lines and taken to the refineries by these lines, thereby saving the freight and tank car expense. This is the logical and economical way for the big companies to handle natural gasoline. The Humble, Shell, and others are handling it at the present time by this method. There is no reason why every pipe line should not do this same thing. Gasoline taken to the refineries this way has a value in excess of its cost. It is valuable for its volatility, high octane rating, and low sulphur content; in fact, it is a godsend to a refinery which is trying to make good gasoline. Undoubtedly our methods of selling gasoline are out of date and should be brought up to the present economic status of conditions.

Pipe Line Transportation

The writer was also asked in this discussion to speak on the transportation of natural gasoline, I presume by our pipe line. This pipe line, as you all know, is handling refinery gasoline, natural gasoline, and pure butane produced from natural gasoline. This method of transporting natural we find is economical and offers no difficulties whatsoever. Our losses are very small, as after all in handling any gasoline, the losses occur in putting it into tanks or loading it rather than during the actual transporting through the pipe line. We find the same pumps will handle the heavier refinery gasoline or butane. The very fact that this is so is the main argument for transporting natural gasoline with crude oil through the modern crude oil pipe line system.

All the main crude oil pipe line systems are, or will be soon, equipped to pump gasoline without ever exposing it to the air. Natural gasoline in crude takes up pump capacity but does not throw any heavier loads on pipe lines, as it lowers the viscosity factor of crude enough that the pumping pressure is reduced even with a larger amount going through the line. All these things being taken into consideration means that as long as the freight represents such a large part of the cost of natural at refineries, natural should be handled through the pipe lines with crude. When this is done and the natural sold as motor fuel, the actual pipe line tariff on this gasoline is less than on that produced from crude because the natural is 100 per cent usable as motor fuel, whereas part of the crude transported has to be sold for fuel oil and other less valuable products than gasoline.

The writer is very anxious that this point be understood, that the big companies must take gasoline through pipe lines if it is to be utilized economically. Any time a big oil company tries to sell gasoline on a market such as we have at this time, they are doing themselves, as well as others, irreparable harm. They lose, due to the cheaper price, on the gas royalties from gas sold from their producing leases, a very appreciable amount of income; they allow this natural to be sold in competition with refined products, especially to the "cut-rate" retailers, and thereby break the selling price of all their refined products. The writer believes that the way natural gasoline is handled from now on will determine whether it is a factor or not in the motor fuel market. This is irrespective of the amount produced but, if it is handled through pipe lines, the actual production will have very little to do with the price, as all that can be produced can be sold this way cheaply as a finished motor fuel.

Small Manufacturer's Position

Getting back to the present, as the writer has said, there is nothing for the small manufacturer to do but to arrange to ship his natural through pipe lines (crude oil lines). The larger manufacturers must weed out their plants and shut down those that are not making a profit or can make a profit even at a somewhat higher price of gasoline. There is no chance of the price going up in any unexpected or startling manner. With the present crude oil supplies, motor fuel cannot very largely increase in price and natural can only follow along motor fuel's lead. I am sure we all are making natural as cheaply as possible. We are allowing engines to wear themselves out and buildings and other plant equipment to deteriorate rapidly because of the lack of ordinary maintenance. This can continue just so long then the plant must either be shut down or put back on a workable operating basis. It looks as if the best thing to do is to consider that it costs so much to make natural and rather than cut men's wages below a living wage or increase their working hours to where they are simply machines working 12 hours and sleeping and resting the remaining few hours they are awake, it would be better to shut weak plants down rather than try to operate them.

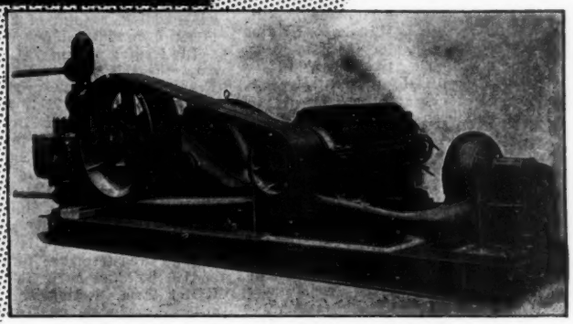
Producers Can Help

The producers can help us out in this situation some by adjusting royalties; that is, it is impossible at present to pay existing royalties and operate. The small plants where royalties are being adjusted can never show much profit, and the gasoline will always be in competition with the larger, more profitable units. The only real excuse for running these plants is the fact that they do give a certain number of men employment at the present time, and in most instances, perform a real service to the producer; that is, they gather the residue and return it equitably to the various producing properties. If repressuring is resorted to, they are the logical distributors of repressuring gas and accounting for it. Any place a plant does shut down it undoubtedly works a temporary hardship on the producer.

The above recommendations are the obvious results of present conditions. However, if we can prepare ourselves to actually take care of natural in any amount in the future, even though the per cent largely increases to motor fuel sold, this depression might be well worth while. Certainly, we manufacturers are learning how to make gasoline cheaply and a lot of the irregularities which have crept into our contracts and operations will be ironed out on a more permanent and fairer basis.

Draw works operated by a G-E Type MD, 100-hp., direct-current motor. All equipment illustrated is in use by Union Oil Company of California

Two engine-driven G-E 75-kw. generator sets for d-c. power supply. Equipment is mounted on trailers for ready portability



Mud-pump drive consisting of a G-E Type MD, 60-hp., direct-current motor arranged for separate ventilation

G-E DIRECT-CURRENT DRIVE HAS SUPERIOR DRILLING CHARACTERISTICS

USERS of this new G-E drive for rotary drilling have found that they've at last obtained the unbeatable flexibility of direct current together with the wide speed-range heretofore thought possible only with steam drive.

Where there are no power lines, this outfit, with Diesel- or gasoline-engine-driven generating equipment, combines the advantages and economies of electric drive and internal combustion engines, namely, smoothness, low maintenance, ease of handling, greatly reduced water consumption, and greatly improved economy of fuel consumption. The engines cannot be stalled by an overload, nor can the electric equipment be overtaxed. Where power can be taken from transmission lines, the same advantages may be realized by using a motor instead of engines to drive the generators.

There are many other advantages inherent in this new type of drive for rotary drilling; why not ask a G-E office—conveniently located near your field—for a copy of descriptive publication GEA-1386, which gives the complete story?

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237-51A

GENERAL ELECTRIC

SALES AND ENGINEERING · SERVICE IN PRINCIPAL CITIES

Central Ohio Division Shows Spurt

More Wells Completed Than for Several Weeks Past. Illinois Alone Without Completions. More Drilling for Gas

By George A. Whitney
Staff Correspondent, Central West Fields

FINDLAY, Ohio, May 25.—The only division of the Central West Field that shows more completions than any other is the central Ohio division where more wells were completed for the past week than for several weeks past, other divisions showing but few, the only one failing to show completions being Illinois. Drilling for gas is more active than for a long period, especially in central Ohio, Indiana, Kentucky and Michigan.

Little has been accomplished in the old Lima Field of northwestern Ohio, there being but one area attracting much attention, the new gas field near McClure in Henry County, where the Lake Shore & Southwestern Metal Co., with the Henry County Oil & Gas Co., has just brought in a gas well on the Nettie McLain farm, Section 12, Damascus Township, which is rated around 2,000,000 feet. This company has six wells under way, No. 1 J. E. Hockman farm, Section 23; No. 1 W. F. C. McKinney, Section 14; No. 1 Francis J. Bell, Section 13; No. 1 Oren Van Tassell; and No. 1 Chopper farm, all in Damascus Township, also No. 1 Frank Schaeffer farm, in Monroe Township, Henry County.

In Hardin County, Pleasants Township, the Jupiter Oil Co.'s No. 1 George A. Matthews farm, Section 18, is showing for a light oil producer in the Trenton Rock. Neely & Underwood abandoned their location on the John Orth farm, Section 1, Cessna Township, and also abandoned location for No. 1 P. L Gardner farm, Section 31, Blanchard Township, same county.

In Wyandot County one of the promising areas of the eastern part of the old Trenton Rock Field is attracting some attention. Jones & Coyle are drilling on the Charles Hoepp farm, Section 17, Tymochtee Township, and McKinney & Drickler are drilling on the Martha and Edward Caline farm, same section and township. In Crawford Township, Harpster and others are starting a test on the Lewis C. Beis farm, Section 11, and Jefferies and others are still working at a second test on the George P. Jones farm, Section 24, same township.

Gebhart and others are drilling on the Walter Rogers farm, Section 2, Fitchville Township, Huron County, for natural gas.

Tiffin Field

The Tiffin Field in Seneca County has been hard hit in both oil and gas, wells showing a sharp slump it is revealed in county tax reports. There are 22 producing gas wells in the county and of these only 5 have a gas volume of more than 5,000 feet. There are 350 producing oil wells and quite a number have been abandoned, being too light for commercial producers. Sandusky Gas Co. is drilling No. 1 D. S. Hostler farm, Section 3, Hopewell Township, Seneca County, for gas. Clarence Donnels is drilling No. 1 Frank Bosler farm, and J. L. Barrett is drilling No. 1 T. N. Ensil farm. Arthur Geyer is drilling No. 3 F. E. Baldwin farm, Section 30, Clinton Township.

In Ottawa County, Harris Township, the Sugar Creek Oil Co. has a location on the H. Klingbeil farm, Section 24. Peninsula Oil Co. is still drilling on the J. P. Caughney farm, Lot 8, Catawba Township. W. C. Richards and others' No. 3 John G. Gnepper, Section 19, Salem Township, is still under way.

A. A. Lauber has shut down his test on the J. W. Long farm, Section 33, Butler Township, Mercer County, where he had a gas showing at 675 feet, and may utilize the gas for heating purposes.

C. W. Sapp is reported shut down on the J. W. Miller farm, Section 32, Jackson Township, Sandusky County.

CENTRAL OHIO

Eighteen completions were registered for the week in the Central Ohio Field of which 3 were oil producers with an initial of 75 bbls.; 2 dry holes and 13 gas wells, while in new work starting there were 7 new locations staked and 13 started spudding, a total of 20, quite an increase over the past few weeks.

In Medina County, Chatham Township, the Edson Co.'s No. 19 Marcus A. Frank farm, Lot 20, produced an initial of 40 bbls. from 412-67 feet. Curtis & Eaken's No. 4 Thomas Brown, Jr., farm, Lot 22, same township, produced 30 bbls. the first 24 hours from 360-405 feet, while Heimer and others' No. 7 William M. Geisinger farm, Lot 10, same township, pumped 5 bbls. initial from 389-437 feet. In Homer Township, the Commonwealth Gas Corp. is drilling on the Charles Fenstermaker farm, Section 15, and is building a rig for No. 4 Frank Rjafer farm, Section 4. Barnhart and others have a rig on the J. A. Holshoe farm, Section 17.

In Lorain County, Columbia Township, the Ohio Fuel Gas Co. has a gas well in No. 2-5,486 C. E. Lehman farm, Lot 73, and McMillan and others have a light gas well in No. 3 on the G. and N. Allen, Lot 80, same township, at a total depth of 2,703 feet, and in the lower Clinton lime formation. In Carlisle Township, the Elyria Steel & Tube Co. is drilling No. 2 F. E. Schwartz and others, Lot 17, same township.

In Wayne County, Harmon & George have a light gas well in No. 2 Effie M. Bates farm, Section 20, Chester Township.

In Ashland County no new completions were reported and but one new well started, the Commonwealth Gas Corp.'s test on the Ira Witmer farm, Section 36, Orange Township.

Richland County

In Richland County, Harmon & George have a fair gas producer on the Isaac Abey and others farm, Section 22, Miflin Township.

In Coshocton County, the Preston Oil Co. reports a dry hole in No. 1-1,483 Howard Wilt farm, Section 6, Perry Township, at a total depth of 3,141 feet. Whittmer & Clay are drilling on the Austin L. Rine farm, Section 7, Pike Township.

In Summitt County, Smith and others have a nice gas producer on the J. R. Layman farm, Section 19, Greene Township, at a total depth of 4,019 feet.

In Muskingum County, Washington Township, the Atha Oil Co. has a fair gas producer on the A. M. Doty farm, at a depth of 3,988 feet.

In Athens County, the Ohio Fuel Gas Co.'s No. 1-5,482 Alphretta Caplinger farm, Section 34, Troy Township, in the Keener sand from 1,110-31 feet. Rose-Yoeman Co.'s No. 17 J. L. Winner farm, in fractional Section 34, Rome Township, was dry in the Maxon sand from 1,051-90 feet. In York Township, Hocking Valley Drilling Co. is drilling No. 1 Price-Patton farm, Section 17, and Vance S. Morgan has a rig up on the Hocking Valley Railroad property, Section 23, same township.

In Stark County, F. A. Brendall and others have a nice gas producer on the Harry Haymaker farm, Section 23, Jackson Township, after a shot in the Clinton lime formation at a total depth of 4,414 feet. Same parties are drilling on the J. C. Steiner, Section 16, same township. East Ohio Gas Co. is drilling No. 3 T. K. Harris farm, Section 34, and has a rig on the Elza Hall farm, Section 13. Stoltz Oil & Gas Co. is drilling No. 2 E. R. Erlinger farm, Section 36, and the Medford Oil & Gas Co. is drilling on the C. Price farm, same section and township. In Lawrence Township, same county, Wittmer Properties, trustee, has a nice gas well in No. 1 on the E. K. Brugger farm, Tract 15, at from 3,961-84 feet. In Paris Township, the Timken Roller Bearing Co. is drilling on the H. H. and M. Essick farm, Section 11.

In Fairfield County, Richland Township, Patton & Bishop have a light gas well on the Clay H. Shaw farm, Section 22, at a total depth of 793 feet. Sturm and others are drilling on the C. F. Basore farm, Section 32, same township. City Natural Gas Works is drilling on the Sophia, Minnie and Anna Gearing farm, Section 14, Pleasants Township, same county.

In Belmont County, Somerset Township, Gibson, Bradfield and others have a light gas well on the James Patterson estate, same township, in the Berea sand from 1,676-94 feet, and W. C. McBride, Inc., has a light gasser in No. 5 on the Howell-Dement property, Section 1, same township, in the Keener sand at 1,500 feet. A. J. West has a rig in for No. 3 F. S. and Nellie Rossiter farm, Section 35, same township.

In Morrow County, Chester Township, H. E. Perkins has started drilling on the C. R. Levering farm, Lots 5 and 9.

INDIANA

Advice from northwestern Indiana is that drilling has been started by H. J. Hauck and others on the John Siddles farm, SW half, Section 4, Lincoln Township, Porter County, about 7 miles south of New Carlisle and approximately 15 miles southwest of South Bend, and 11 miles from Laporte, and is located on a high structure easily accessible, about a mile north of Mill Creek. The location was made by Dr. V. S. Hollingsworth, geologist and chemist, for gas. A gas well in this locality is expected to prove quite an asset as the gas can be piped to South Bend, New Carlisle, Laporte or Michigan City. When the location was scouted early in May it looked more like oil would be found, being in the northeast arm of the Kankakee Valley which has proven for oil in the lower marshy lands, similar to that around Medarysville and Francisville, where natural lubricating oil is found at comparatively shallow depths. If this test proves either oil or gas, it may cause a lot of drilling, being so far removed from production.

Another good strike is reported from Spencer County, in the extreme southern part of the State, the Santa Fe Oil Co.'s No. 3 on the Mary Berg farm, Section 2, Huff Township, which is said to show 50 bbls. initial from 578-97 feet.

Connelly and others' test, 660 feet from the north line and 200 feet from the east line of the Matilda Walters farm, NW NE, Section 29, Haddon Township, Sullivan County, was dry at 725 feet.

C. C. Taliaferro, Jr.'s test in the northeast corner of the S. Jones farm, NE NE, Section 36, Veale Township, Daviess County, was dry at 1,150 feet.

Cato Oil & Gas Corp.'s test in the southwest corner of the Everett Crow farm, NE, Section 25, Patoka Township, Pike County, was a dry hole at 1,110 feet. Wiser Oil Co. is drilling on the Charles C. Dodge farm, NW NW, Section 24, Washington Township, same county.

Mount Vernon Co., or V. D. Smith is reported drilling on the Will Hitch farm, in Vandeberg County, in the extreme

(Continued on Page 80)

METHODS OF OBTAINING BALANCED BANDWHEEL PUMPING POWERS

By R. E. Bridges
Humble Oil & Refining Co., Wichita Falls, Tex.*

The purpose of obtaining a condition of balanced load is not to save power but rather to save machinery. Balance will permit the use of an engine of smaller horsepower than would be required with an unbalanced load, although the total power consumed would be practically the same in both cases. This is because the engine must have sufficient power to pull over the peak load even though it may idle past the minimum load point. Since in the larger engines there are more power losses in the engine itself than in the smaller one, there results a small saving in power by using the smaller engine. There is also a small amount of power loss due to excessive friction between eccentric and ring and belt slippage at the peak load. Other than these, however, there are no advantages from the standpoint of power saving in having a balanced load. Any other reasoning would violate the fundamental laws of mechanics. This has been proved by results of our own work. The chief advantage of obtaining a balanced load is the saving in machinery repairs by eliminating the jerk and excessive friction on the entire unit which results from a one-sided load.

We determine when a power is out of balance by listening to the engine exhaust or rocking back of the load when the clutch is thrown out. We then weigh all wells with a recording dynamometer, obtaining a chart on each well which shows its weight at all points of the stroke—both up and down. By weighing the well at the power we get not only the weight of rods and fluid but also friction in the hole and friction in the shackle line. Two wells of the same depth and pumping approximately the same amount of fluid will frequently vary widely in weight due to the friction factor.

In computing for balance in the office we figure each eccentric independently of the other; because, though the power as a whole may be nearly balanced, each eccentric may have a high peak load on opposite sides so that they offset each other. This would, of course, cause excessive friction between each eccentric and its ring. If both eccentrics are balanced separately then, obviously, the power as a whole would be balanced. So—now considering only one eccentric—we draw a force polygon of all forces acting on it at eight different points of its resolution, these points being 45° apart. By combining the eight different resultant forces obtained from the eight force polygons, we can determine the magnitude and direction of the counterweight necessary to balance the load.

It frequently happens that a well can be changed from one eccentric to the other to obtain the desired results. Again it may be necessary to pull one or two wells on swings. We find that compared with the total weight of a well, there is little friction loss in a properly built swing. Less frequently it may be

(Continued on Page 80)

*Before Wichita Falls chapter of the A.P.I. division of production.

Completions Gain in Eastern Field

Sixteen of 24 Are Gas Wells and Two Oil Producers in West Virginia. Three Oil Wells and One Gasser in Ohio

By Staff Correspondent

PITTSBURGH, Pa., May 25.—Completions in the eastern fields increased considerably in number over the week. They totaled 24, of which number 17 are gassers and 5 are oil producers. The remaining two completions are dry holes, located one each in West Virginia and the southeast Ohio fields. Sixteen of the gassers are in West Virginia and two of the oil producers, with an initial of 5 bbls., are also in that field. Ohio reported three oil wells, with a 21-bbl. production, and one gasser. The southwest Pennsylvania Field reported no completions for the week's work.

SOUTHEAST OHIO

The Clinton sand of New Castle Township, Coshocton County, and on the William Frazee farm, is producing oil at the rate of 10 bbls. within the first 24 hours after being shot, from a depth of 3,285 feet, for the Preston Oil Co. This is from a test well. The test of E. J. Edmonds and others on the J. W. Atwood farm in Section 8, Perry Township, Licking County, is a 3-bbl. producer from the Berea sand and at a depth of 682 feet. The Frazeysburg Rex Oil & Gas Co., Inc., drilled its test on the S. R. Williamson farm, Section 4, Ludlow Township, Washington County, down into the Injun sand and at 1,468 feet has a combination oil producer and gasser. Its oil production within the first 24 hours after being shot was 8 bbls. and at the same time this well is showing for a fair gasser.

In Noble County, Stock Township, the Henderson Oil Co. has a very light gasser on the Ernest Wells farm in Section 26, which it completed at 1,930 feet in the Berea grit. The Wells farm is in the NE of the section. The test operation of the Preston Oil Co. on the Chase Griffon farm in Section 5, Perry Township, Coshocton County, ended in a dry hole in the Clinton sand at 3,280 feet.

WEST VIRGINIA

In Walker district, Wood County, and on the waters of Walker Creek, John Leeten and others drilled their test on the Sarah Lemley farm down to the Maxon sand, from which sand it is a 3-bbl. producer. In Washington district, Pleasants County, Dinsmore & Co. completed their second test on the Job Smith farm at 578 feet and in the Cow Run sand as a 2-bbl. oil well. In the process of drilling well No. 1,645 deeper, the United Fuel Gas Co. completed its operations at 5,011 feet and in shale, where it was found dry. This well, located on the Presley Vineyard farm in Smithfield district, Roane County, is being abandoned.

Gas Wells

In Boone County the Pure Oil Co. completed two more of its wells on the Federal Coal Co. tract in Sherman district as gassers. No. 50 came in as a light gasser, and No. 51 came in as a good gasser. No. 4 of the same company on the L. Sutphin farm in Sherman district was completed as a very fair gasser.

The Winifrede Co. were very successful in the Kanawha County Field during the week. It completed Nos. 7, 8 and 15 on its own tract in Cabin Creek district as light gassers. The Sunday Creek Coal Co. tract in Cabin Creek district is the location of a very fair gasser belonging to the United Fuel Gas Co. This is No. 4,268 of the company. The Ten Mile Oil & Gas Co. drilled its No. 11 on the H. C. Dickinson farm in Malden district down to a depth of 2,486 feet for a fair gasser.

Goff and Woodward completed a 2,000,000-foot gasser about 1½ miles south of Harrisville. It is on the J. A. Coffield farm in Union district, Ritchie County. This well is a test, and its production is from the Injun sand. The test of Clem Morris and others on the W. F. Riberts farm in Dekalb district, Gilmer County, was completed at 1,990 feet and in the Injun sand as a light gasser, and in the same district McCall and others completed their test on the W. A. Moore farm in the Injun sand as a very light gasser after drilling it to a depth of 2,207 feet.

On Lees Creek and the L. E. and W. I. Kinnard farm in Grant district, Cabell County, the General Gas Co. brought in its test in the Berea sand at a depth of 2,460 feet. It is a very light gasser. Miller and Lang have a very fair gasser in No. 4 on the G. F. Anderson farm in Sherman district, Boone County, and the test of J. V. Reishman on the W. M. Dent farm in Scott district is a light gasser. The United Fuel Gas Co. drilled No. 4,121 on the M. J. Rogers farm in Curry district, Putnam County, to deeper sands and at 5,080 feet had a very light natural gasser.

In Union District, Wayne County, C. C. Wolfe is cleaning out his test on the Sig. Adkins farm after shooting it at 3,148 feet. This well came in as a very light natural gasser. The Heck Oil Co. cleaned out its second test on the H. W. Allen farm in Reedy district, Roane County. This well, located on Sugar Camp Run of Reedy Creek, was producing at the rate of 8 bbls. per day, but the cleaning out operation increased the production to 25 bbls. per day.

In Carroll district, Lincoln County, No. 3 of Katherine Moore, administratrix, on the B. F. Roberts farm, has been drilled down to a depth of 2,544 feet and in the Berea sand, where it is awaiting a test. M. V. Jennings, trustee's test in Chapmansville district, Logan County, is likewise awaiting a test in the Big Lime and at 1,256 feet. On the William Living farm on the waters of Straight Fork in Burning Springs district, Wirt County, R. C. Waggoner and others' test is awaiting a test at 1,945 feet.

In Ritchie County, three wells are awaiting tests. They are the test of J. F. Deem and others on the Rosa V. Johnson farm in Murphy district at 1,760 feet; No. 4 of the King Knob Gas Co. on the Payton Tingler farm in the same district and at 1,693 feet, and H. N. Rinehart's No. 6 on the T. E. Moore farm in Grant district. The last well has been drilled to 1,845 feet.

Drilling in West Virginia

In Calhoun County, the Rocksdale Oil & Gas Co. has its test on the Roy Starcher farm shut down after drilling it down to a depth of 1,825 feet. The Starcher farm is in Lee district. The Crummies Creek Fuel Corp. is drilling in its test on the L. G. Garrett farm in Lee district at 150 feet. In the same district, F. F. McIntosh has the material on the ground for No. 3 on the Fox and Morgan tract, and Creed Barker and others are building a rig on the Methodist Episcopal Parsonage lot. In Washington district, Doctor Hively and others are drilling at 500 feet in their second test on the William M. Hall heirs farm, and Wiseman and Jackson are the owners of a rig standing on the Elizabeth J. Boothe farm. F. F. McIntosh is constructing a rig on the Jarvis and Ulderish tract in Sherman district for a test.

The Chemical Oil Co.'s No. 3 on the Harriett Fling farm in Sheridan district, is drilling at the 920-foot level. The test of C. B. Lewis and others on the Lewis Wolverton farm in the same district has been drilled down to the 1,310-foot level, and the test of Creed Barker and others on the B. R. Holbert farm is now at 1,450 feet. In Center district, the United Fuel Gas Co. now has its No. 4,279 on the Tell McDonald farm down 1,965 feet, and the Bowser Oil Co. has No. 3 on the W. H. Jackson farm at 840 feet. Godfrey L. Cabot has selected a location for his third well on the Scott Umstead farm in Center district. W. H. Bickel has drilled his No. 4 on the J. M. Bennett heirs farm down to a depth of 1,995 feet. This operator has material on the ground for a test on the I. N. Gainer farm, and has made a location for his third well on the John Starkey farm. These operations of W. H. Bickel are in Center district. T. J. and A. H. Jackson are rigged up on the T. J. Jackson farm in the same district.

Roane County

In Harper district, Roane County, the Clifton Oil & Gas Co. has part of the material on the location selected for No. 3 on the J. L. Looney farm. On the Beaver Coal Co. tract in Slab Fork district, Raleigh County, Godfrey L. Cabot has his No. 5 well shut down after drilling it down to a depth of 2,344 feet. The same operator has a rig standing on the Beaver Coal Co.'s tract in Trap Hill district. The test on the Samuel Hinkle farm in Williamsburg district, Greenbrier County, belonging to the Thompson Harris Co., is shut down at 1,940 feet.

No. 4,053 of the United Fuel Gas Co. located on the J. W. Hinzman farm in Curtis district, Roane County, has been shut down after having been drilled to 6,760 feet. In the same district, the Reedy Oil & Gas Co. has made a location for a second test on the A. J. Paugh farm. Paul Weekley and others are shut down at 2,380 feet in their test on the Gay M. Sergent farm in Spencer district, and the Ohio Valley Gas Corp. has part of the material on the ground for No. 15 on the R. M. Jennings farm in the same district. In Reedy district, the Heck Oil Co. has hauled in part of the material for its No. 5 on the H. W. Allen farm.

W. W. Dailey and others are drilling at 1,165 feet in their test on the J. O. Mills farm in Sheridan district, Calhoun County, and have made a location on the Rome Bowers in the same district. The material has been moved in on the Ida Shroyer farm by the United Fuel Gas Co. for its No. 419. The Shroyer farm is in Sheridan district, and in this district R. C. Waggoner and others have selected the location for their test on the J. H. Hayhurst farm.

Mason County Test

A location has been selected by the Hartford Salt Works for a test on the Burt Sayre farm in Cooper district, Mason County, and in Graham district, the E. C. Moffett Drilling Co. is drilling in its second test on the William Newton heirs property. Grosscup and Schultz are rigged up for No. 5 on the Black Betsey Coal Co. tract in Kanawha district, Fayette County, and have made location for Nos. 6 and 7 on the same tract. In Williams district, Wood County, Crawley and Carr have made location for a second test on the C. A. Varner farm, and in Union district, H. E. Flanigan is drilling in his test on the A. J. Coffield farm at a depth of 1,850 feet. In the same district, Robert Elder and others are to drill on the William Wilson farm. Location has been made.

W. A. Bickerstaff has completed the construction of a rig on the Mary E. Dicks farm on the waters of Big Run of Reedy Creek in Reedy district, Wirt County. This rig is for a test well. The Hope Natural Gas Co. has decided to drill its second test on the Thomas S. Morris farm to deeper sands. This well, located in Ten Mile district, Harrison County, is a Thirty-Foot sand gasser and the prospects in drilling it deeper are for oil in the Gordon sand.

In Monongalia County the Philadelphia Gas Co.'s No. 5,402 on the J. Ray Conner farm in Clay district is drilling at the 2,300-foot level, and the Pedlar Run Oil Co. has its test on the Lewis R. Hess farm shut down at 2,570 feet. The Hess farm is also in Clay district.

SOUTHWEST PENNSYLVANIA

Drilling operations in the southwest Pennsylvania Field failed to produce a completion for the week's work. The test on the J. E. Scott farm in Center Township, Greene County, belonging to J. B. Orndoff has been drilled to 1,300 feet, and the Manufacturers Light & Heat Co.'s No. 3,443 on the Felix Bell farm is now drilling at 680 feet. The Bell farm is in Wayne Township. In this township, the test of D. L. Shafer & Co. on the William Jones farm is shut down after being drilled to 850 feet. The Carnegie Natural Gas Co.'s test on the F. G. Jacobs farm in Center Township is now drilling below 1,160 feet.

DRAKE WELL MEMORIAL CONTRIBUTIONS WELCOMED

Contributions to the fund being raised to establish a park at the site of the Drake well near Titusville, Pa., have not been sufficient thus far to meet the expenses involved. Contributions of any amount may be sent to W. R. Boyd, Jr., chairman of the committee in charge of the project, who says the aid thus given will go far to lighten the load on the shoulders of the men who have assumed the responsibility of completing the undertaking. The accompanying subscription blank may be used.

DRAKE WELL MEMORIAL PARK FUND

....., 1931

I hereby subscribe $..... toward the fund for preservation of the Drake well site, to be paid on ....., 1931, and ....., 1931.

Cash herewith, $.....

Signature.....

Address .....

.....

Fill out and mail to W. R. Boyd, Jr., American Petroleum Institute, 250 Park Ave., New York, N. Y. Make checks payable to "Drake Well Memorial Park Fund."

Personal Paragraphs About Oil Men

George L. Radcliff, president, California Talc Company, Los Angeles, Calif., was in Tulsa last week.

* * *

E. L. Decker, of Martin-Decker Corporation, Long Beach, Calif., is in Tulsa. He is making a tour of the Mid-Continent fields.

* * *

C. B. Ames, New York, vice president of The Texas Company, visited the offices of the company at Houston, Tex., on business.

* * *

A. G. Maguire, president of the Bartles-Maguire Oil Company, spent several days last week visiting the Mid-Continent offices of the company located at Tulsa.

* * *

E. V. Allen has been elected a director to fill a vacancy on the board of directors of the Seaboard Oil & Gas Company, formerly the Mexican Seaboard Oil Company.

* * *

Jim Morgan, who was connected with the sales department of the Smith Separator Company and later with the Camp-Morgan Company, is now with Black, Sivalls & Bryson.

* * *

Frank E. Bernsen, vice president and general manager, and Hugh B. Hodges, special representative, of Lucey Products Corporation, have returned from a business trip to East Texas.

* * *

A. P. Robertson, formerly with the Pure Oil Company, has been made superintendent of the automobile service department of the Indian Territory Illuminating Oil Company, at Oklahoma City, Okla.

* * *

James A. Talbot, former president of the Richfield Oil Company, has resigned as president and director of the Western Pipe & Steel Company of California, and has been succeeded by H. G. Tallerday.

* * *

B. M. Nowery, general superintendent of the United Production Corporation, Houston, Tex., has returned from a trip which took him to the natural gas convention at Memphis, Tenn., as well as to northern points looking over company pipe line interests.

* * *

Frank H. Jones, formerly production superintendent for the Blackwell Oil & Gas Company in southern Seminole County, Oklahoma, has been transferred to Rusk County, in East Texas, to be in charge of the company's production. L. V. Nugent is his successor.

* * *

G. A. Waring, consulting geologist, Tulsa, leaves for a four months' trip to Alaska soon and sails from Seattle, Wash., May 30 with several parties of geologists recently engaged by the United States Geological Survey to make examination of mineral deposits contiguous to the Alaska Railroad.

* * *

W. R. Emerson, has been named vice president and treasurer of the Oklahoma Gas & Electric Company; George A. Davis, vice president in charge of public relations; Frank J. Meyer, vice president in charge of operation; and B. M. Lester, secretary.

* * *

P. V. McGivern, representative of Baker Oil Tools, Inc., has left on a business trip to Los Angeles, Calif., and will be gone about three weeks. He will also include San Francisco and Salt Lake City in his itinerary.

* * *

H. L. Dickerson, vice president of the United Pipe Line Corporation, has been transferred from Houston, Tex., to the New York offices of the company. His work at Houston will be assumed by R. H. Hargroves, who has been elected vice president of the pipe line company in addition to his duties as vice president of the United Production Corporation.

R. J. Daugherty, director of public relations with the Empire Oil & Refining Company, was elected mayor of Bartlesville, Okla., recently.

* * *

Leonard Bell, for a number of years with the American Tank Company, of Oklahoma City, Okla., is now with the Star Manufacturing Company.

Men of the Industry

C. G. Hamill

Few men, if any, have a closer tie to the oil business of Texas than C. G. (Curt) Hamill, of Houston, for he was the driller on the original Lucas gusher, which on that memorable January 10, 1901, blew in, opening Spindletop. Since then, Mr. Hamill has been closely associated with the oil development of the Gulf Coast, going through the booms at Sour Lake, Batson and others. More recently he pioneered at Markham, the most westward of the Coastal domes and is credited with a large part in the opening of that field.

At present Mr. Hamill is president of the Hamill Drilling Company, Inc., Hamill & Hamill, Hamill-Smith Oil Corporation, and other interests, in which he is associated with his sons. In the last-named company, "Bob" Smith, Houston operator, is interested also.

Although not a native of Texas, Mr. Hamill has been a resident of that State almost all his life. He was 4 years old when his parents settled in Waco, in 1876. His father became a prominent farmer of McLennan County, of which Waco is the county seat. Young Curt was educated in the public schools of Waco and at Baylor University, also of that city.

In 1897, Mr. Hamill entered the oil fields around Corsicana, where he worked on many rigs and drilled numerous wells. His first experience was with cable tools but after two years at them he became a rotary driller. In the autumn of 1900 he moved to Beaumont, where he, with his brothers, Jim and Al, formed the company known as Hamill Brothers, contractors. It was in this connection that he drilled the Lucas discovery gusher of Spindletop. He remained at Spindletop and drilled many wells but when Sour Lake came on he went there, and then to Batson. Later he moved to Houston, where he has continued in the well contracting business with his three sons, Ellis, Claude and P. R. Hamill.

Mr. Hamill is on his way to England, where he will spend the next several months touring that country and also parts of the European continent.

A. I. Brainard, president of the Beaumont Iron Works, Beaumont, Tex., was a Tulsa visitor recently.

* * *

W. R. Manus, district geologist with the Sinclair Oil & Gas Company at Shawnee, Okla., has been transferred to Tyler, Tex.

* * *

Daniel T. Pierce, assistant to the president of the Sinclair Oil & Gas Company, was elected a director of the company to succeed E. V. R. Thayer.

* * *

Louis B. O'Neil has been made a director and vice president of the Montana Power Company, in charge of the natural gas producing department.

* * *

A. O. Pegg, marine superintendent of the Union Oil Company, has been elected a director of the Bilge Club, an organization composed of shipping men.

* * *

Harry W. Schuetz, special representative of the Colona Protector Company, Pittsburgh, Pa., has returned home from a trip to the Pacific, Gulf Coast and East Texas fields.

* * *

H. A. Wood, secretary of the E. H. Edwards Company, San Francisco, Calif., with John Sloan, sales representative in the Mid-Continent fields, visited the East Texas fields recently.

* * *

R. C. Jopling, head of the marketing department of the Phillips Petroleum Company, Bartlesville, Okla., visited the company's Wichita, Kans., offices on his way to Omaha and Minneapolis.

* * *

Ed. Hanlon, of Caney, Kans., an independent operator, has been made deputy state oil and gas inspector for 14 counties in the southwestern part of the State, with headquarters in Dodge City, Kans.

* * *

D. J. Wolff, of Bartlesville, Okla., and a geologist with the Phillips Petroleum Company, is in Lush, Wyo., preparing to start a core drilling campaign on the Middle Creek structure near Manville, Wyo.

* * *

B. O. Hindman, district superintendent of production at Seminole, Okla., for the Indian Territory Illuminating Oil Company, has been elected chairman of the American Petroleum Institute chapter at Seminole.

* * *

W. A. Williams, president, and C. M. Johnson, chief engineer, of the Crown Central Petroleum Corporation, Houston, Tex., have returned from an extended business trip to New York and other eastern points.

* * *

W. L. Todd, production superintendent of the Simms Oil Company at Dallas, Tex., has resigned, effective June 1, to assume the presidency and management of Trinity Drilling Company and Mid-Texas Oil & Gas Company.

* * *

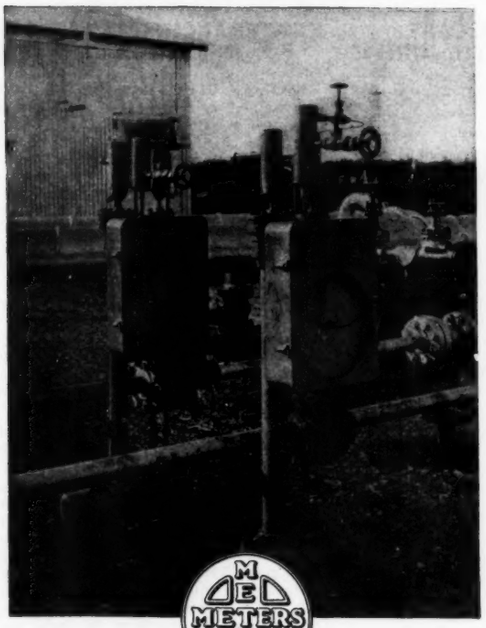
J. F. Drake, Pittsburgh, Pa., president of the Gulf Oil Corporation, and W. V. Hartman, vice president of the Gulf Refining Company, also of Pittsburgh, spent several days in Houston, Tex., conferring with company executives on the Gulf Coast.

* * *

W. A. Reanier has been appointed manager of white oil sales for the Associated Oil Company and will direct the sales of gasoline, engine distillate and kerosene throughout the Pacific Coast territory from his headquarters in the general offices at San Francisco.

* * *

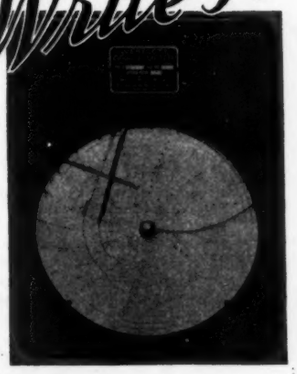
W. G. Winters, vice president and general manager of the Houston Gas & Fuel Company, Houston, Tex., has been transferred to the general offices of the United Gas System, Houston, where he will be engaged in public relations work. K. L. Simons, assistant general manager of the Houston Gas & Fuel Company, succeeds Mr. Winters.



METRIC METERS

Make History — and Write It

At the largest pressure-maintenance plant in the oil industry, the formation pressure is maintained by passing gas back to producing sands. Metric Westcott Orifice Meters play an important part in this history-making procedure—both by measuring the gas fuel used at the compressor station, and by measuring the compressed gas sent down to the wells in order to maintain the flow of oil. Also the accurate charts autographed daily by the meters provide permanent records of these important operations—thus writing the history which they help to make.



The upper photograph shows Westcott Orifice Meters installed on discharge line from a high-pressure compressor plant. From the highest to the lowest pressures found in the oil industry, and for vacuum lines, too, Westcott Orifice Meters and Metric Indicating Flowmeters provide greatest possible accuracy in measurement of liquid or gas flow.

METRIC METAL WORKS
ERIE, PENNSYLVANIA
AMERICAN METER COMPANY
INCORPORATED
The World's Largest Manufacturers of Gas Meters and Allied Apparatus
ESTABLISHED 1836

SALES . . . ERIE - DALLAS - TULSA - DENVER - LOS ANGELES - SAN FRANCISCO - KANSAS CITY - BIRMINGHAM
SERVICE . . PITTSBURGH - CHICAGO - PHILADELPHIA - NEW YORK - BALTIMORE - BOSTON - ALBANY - HOUSTON

Natural Gas Industry Developments

EL DORADO RATE CASE DELAYED UNTIL JUNE 25

TOPEKA, Kans., May 23.—No decision will be rendered by the three judge federal court in the Eldorado rate case until June 25. The Doherty suit asks an injunction against the commission to restrain interference with gas rates in Eldorado.

The court consists of Judge Orie L. Phillips, presiding, Judge Richard J. Hopkins and Judge J. Foster Symes.

Robert D. Garver, counsel for the Gas Service Co., and Robert Stone, special counsel for the Doherty interests, filed an amended bill of complaint, stating that the witnesses and lawyers supplied to the Kansas Public Service Commission all the facts sought by that body as to the cost of gas delivered at the city gate at Eldorado at 40 cents a thousand feet, that the reasonableness of the 40-cent rate had been adjudicated by the federal court and by the State Supreme Court, and that the Kansas commission had accepted the edicts of the two courts. For that reason, the amended bill says the Doherty interests relied on the commission's acceptance in good faith of the court findings.

The judges decided the Public Service Commission could have five days to file the answer, the Doherty attorneys 10 days to file affidavits in support of their application for a temporary injunction and the commission additional time to file affidavits in rebuttal. The points to be determined, if the litigation reaches the stage where a special master's services are required, will be the cost to the pipe line of the gas it sells at the city gate at Eldorado for 40 cents a thousand; and the cost to the "engineering and management" service.

"The court," Judge Phillips said,, "is willing and anxious that the parties should compromise or settle their differences. In fixing the date the court is giving an opportunity to reach a compromise. If a compromise is not reached by that time, the court will proceed with all dispatch to dispose of this case. This sort of litigation should be disposed as speadily as possible. If the plaintiff is entitled to higher rates at the point of service, that finding should be made as quickly as possible. On the other hand, if the State Commission should be upheld in its contentions, that right should be determined speedily."

FUEL OIL COMPETITION CAUSES RATE REDUCTION

LOS ANGELES, Calif., May 23.—Industrial and commercial consumers of the Southern Counties Gas Co. are expected to benefit to the extent of $50,000 annually as the result of reduced rates authorized by the state railroad commission. The industrial plants affected are largely in the harbor district. Some, however, are in the Santa Monica Bay region and others scattered through Orange County. Isolated consumers are in Pomona, Upland and Ontario.

Officials of the gas company said they had requested the rate reduction several weeks ago to meet competition of cheap fuel oil. They said the new cheap rates could not be placed in effect until a formal order setting the time had been received from the commission.

The commission also authorized the Needles Gas & Electric Co. of Needles to make reductions in rates totaling to $5,000 annually. Various other California communities benefited under new cheap rates, occasioned, it was said, because of cheap fuel oil competition.

NEW FRANCHISE ASKED IN KANSAS CITY, MO.

KANSAS CITY, Mo., May 23.—The city council is expected to take action soon on the request of George T. Wentzel, president of the Industrial Engineering Co., for an industrial gas franchise. The council's public utility committee has introduced a substitute ordinance for Wentzel's original measure introduced last January. The substitute ordinance, approved by George Kingsley, city counselor, was recommended for passage by two members of the committee. Two other members said they desired to study the ordinance.

A. S. Marley, attorney, said Mr. Wentzel had been assured of from $3,000,000 to $4,000,000 in backing from eastern capitalists who desired to be kept in the background until later.

Under the franchise Mr. Wentzel agrees to lease or construct a pipe line from Oklahoma or Texas gas fields to Kansas City and to set up a distribution system for the sale of industrial gas on a sliding scale of from 15 to 33 cents per 1,000 feet. He also agrees to furnish to the city or any company at the city's gates 50,000,000 feet a day for domestic consumption at 25 cents per 1,000 feet. The Kansas City Gas Co. now pays a pipe line company 40 cents per 1,000 feet at the city's gates.

Under the substitute measure Wentzel would have 60 days to accept the franchise after the ordinance is passed and would have to apply to the public service commission for a certificate of necessity in 40 days after accepting the franchise.

WILL DRILL 10 TESTS AROUND SOMERSET, KY.

SOMERSET, Ky., May 23.—H. W. Young of Tulsa, Okla., has been awarded a contract by the Kengreen Gas Utilities Co. to drill 10 test wells in Pulaski County to ascertain if gas can be found in quantities sufficient to furnish this territory with a gas supply. The first well will be drilled on the D. C. Newberry farm near Grundy. A rig was moved here from Wayne County and the first test is drilling at 200 feet.

Mr. Young has leased 12,099 acres of land in this county and all the wells will be drilled within a radius of 10 miles of Somerset.

The wells will be started within 60 days. It is expected that gas will be found at a depth of 550 feet, said Mr. Young.

Should the test wells fail to find a gas supply sufficient to furnish Somerset, Ferguson and Burnside with gas, a transmission line will be built into the gas fields of eastern Kentucky. This work can be accomplished in 60 days, said R. L. Flora, of Corbin, vice president and general manager of the Kengreen company, who was here last week. There will be no delay in furnishing this territory with gas according to the terms of the franchise, the Kengreen official stated.

HUGOTON GATHERING SYSTEM

The Saxet Co., through its subsidiary, Missouri Valley Gas Co., has started construction of a $2,000,000 gathering and delivering system for its natural gas properties in the Hugoton Field, southwest Kansas. The system will have a total length of 150 miles and will gather gas from the 87 wells of the Saxet Co. in this field for delivery to the 800-mile line of Northern Natural Gas Co. now nearing completion.

CARBON BLACK PRICES ELIMINATING PROFITS

Directors of United Carbon Co. have omitted the semiannual dividend of $3.50 due at this time on the 7 per cent participating noncumulative preferred stock, of which 18,578 shares of $100 par value were outstanding at the close of last year. Action was taken due to the fact that earnings were not sufficient to cover preferred dividend requirements and in order to conserve cash for the drilling program in Kentucky Field in connection with the contract with Columbia Gas & Electric Co.

Through the election of Hunter S. Marston as a director and Charles A. Cushing as a member of the executive committee, Bancamerica-Blair Corp. has become represented in the management of United Carbon Co.

Profit of the company for the quarter ended March 31, 1931, was $22,257 after depreciation and depletion, but before Federal taxes, against $28,157 for the last quarter of 1930. In March quarter of 1930, company reported net profit of $263,300 after charges and Federal taxes, equivalent under the participating provisions of the shares, to $2.12 a share on 21,069 shares of participating preferred stock and 52 cents a share on 393,073 no-par common shares.

Oscar Nelson, president, stated that the continued depression in the carbon black industry has consistently reduced prices until profits from that branch of the business have been practically eliminated and this condition may also affect the profits for the remainder of this year.

"Meantime, especial attention has been given to increasing gas sales and this growing division of the company's business has a promising outlook but profits from the increase in the department will be reflected to only a small extent in this year's business because deliveries under the Kentucky contract do not begin until late in the year," he said.

"For the information of the stockholders in general, appraisal is being made of all the properties of the company. This appraisal has now been completed upon the company's eastern Kentucky gas property and the gas contract thereon and this one property, only partially developed, is given a value by this engineer of an amount equal to all of the company's outstanding common stock at the present market price.

"The statement shows the company in a sound financial position so that promising development or expansion need not be postponed and it is the company's intention to preserve its position through the present conditions and be prepared for future advantages."

G. Alvin Williams was also elected a member of the executive committee and was made first vice president of the company. He is succeeded as secretary by Carl H. McHenry.

VINITA FRANCHISE

The city council of Vinita, Okla., has adopted an ordinance granting a gas franchise to the Vinita Fuel Co., subject to a vote of citizens at an election to be called later. By a vote of 79 to 1, citizens of Carney, Okla., granted a gas franchise to the Pact Gas Co.

MEMPHIS NATURAL DIVIDENDS

Directors of Memphis Natural Gas Co., affiliate of Appalachian Gas Corp., have declared the regular quarterly dividends of $1.75 per share on the preferred stock, payable July 1 to shareholders of record June 20, and 15 cents per share on the common stock, payable July 15 to shareholders of record June 30, 1931.

OHIO CAN TAX GAS FROM OUTSIDE STATES

WASHINGTON, D. C., May 25.—The right of the State of Ohio to tax gas piped from other states by the East Ohio Gas Co. has been upheld by the Supreme Court.

Associate Justice Butler said that when the gas passes from the distribution lines into the supply mains it is like breaking an original package after shipment in interstate commerce.

The company must pay about $1,000,000 additional excise taxes for 1927, 1928 and 1929. The State henceforth will receive about $500,000 a year from this source.

The company contended that the gas piped from neighboring states was in continuous motion from the time it left the wells until it reached the burner tips in 50 Ohio municipalities, and therefore was in interstate commerce.

The lower court sustained the state law and was upheld by the Supreme Court.

"The Ohio statute does not purport to affect interstate commerce," Justice Butler said. "The specified excise taxes are laid for the privilege of carrying on intrastate business. The amounts were calculated on gross receipts derived wholly from appellant's intrastate business, notwithstanding the gas used had moved in interstate commerce."

AMARILLO TO DECIDE ABOUT VOTE MAY 29

AMARILLO, Tex., May 23.—Placing a value of $750,000 on the distributing system of the Amarillo Gas Co., the city commission has filed a petition in county court to condemn the property and acquire it for municipal ownership and operation.

Mayor Ernest O. Thompson said the value was determined by taking the gas company's statement of its replacement value as revealed in a recent audit, and deducting depreciation, which was given in a statement filed with the city commission early this year.

The audit, made 18 months ago, valued the property at $1,440,700, and the recent statement filed with the commission placed depreciation of the past year at $639,945, and depreciation for the last few months brought the value down to $750,000, the mayor said.

In reply to recent request of gas company officials that pipe lines must be taken into consideration in estimating the damage, the commission states that the pipe lines were not considered a part of the distributing system, according to the franchise.

A public hearing to determine whether the city is to pursue its condemnation plans or submit the issue to a vote of the people, has been set for May 29.

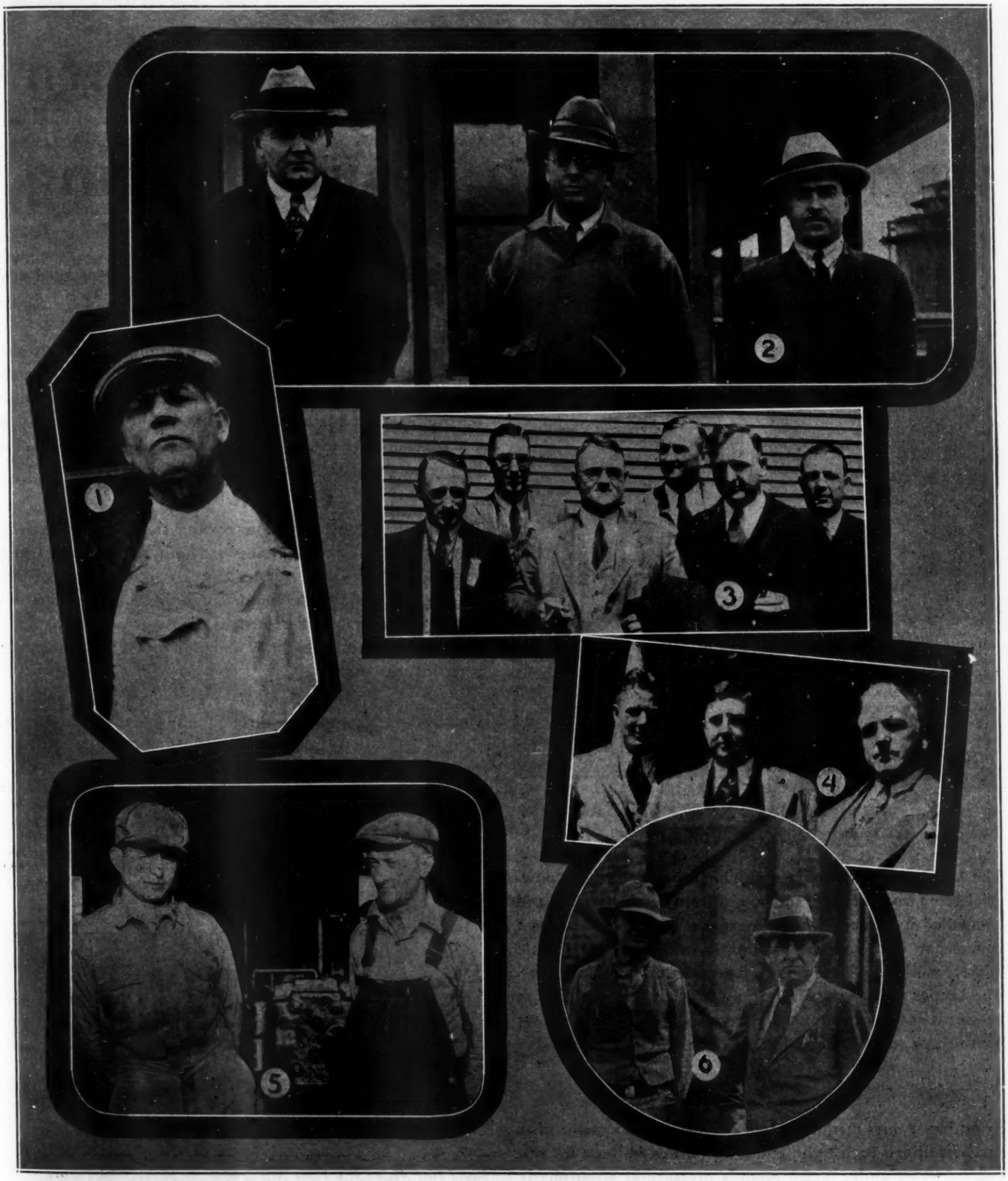
FLORIDA TAX ON GAS

House bill No. 557, introduced in the Florida Legislature by Representative Keen, provides for the levy of a tax at the rate of 10 cents per 1,000 feet upon natural or manufactured gas used or consumed in the State of Florida for light, heat or power; for reports of the distribution and sale of such gas, and fixing a penalty for violation.

WANT PIPE LINE LAW

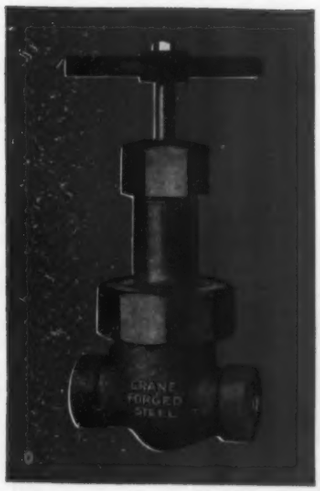
CARTHAGE, Mo., May 23.—Enactment of federal and state law compelling pipe line companies to furnish gas to municipally owned distribution systems was urged in resolutions adopted at the closing session of the convention of the Missouri Association of Municipal Utilities.

Active Oil Men Posed Before The Journal's Cameras



1—John T. Kimbro, superintendent machine shops, Texas Pacific Coal & Oil Company, Thurber, Tex. 2—C. J. Simons, assistant superintendent; F. Carl Notson, chief clerk; and Don V. Eells, superintendent, Empire Oil & Refining Company, Okmulgee, Okla. 3—Front row, left to right: J. A. Bates, J. R. Jarvis and A. Neill. Back row, left to right: L. B. Wood, E. Buddrun and John Clark, natural gasoline department, Lone Star Gas Company. 4—Harry Henry, transportation superintendent, Lone Star Gasoline Company; C. J. Moore, manager, Oil Belt Motor Company; and F. G. Younker, district superintendent, Lone Star Gasoline Company, all of Ranger, Tex. 5—Bill Davis, oiler; and C. Keeney, engineer, Indian Territory Illuminating Oil Company, Lemon plant, Oklahoma City, Okla. 6—H. B. Myers, assistant superintendent, and H. L. Welton, superintendent, Garber Refining Company, Garber, Okla.

Forged steel bottles that compel the genie of modern industry to do your bidding



Forged Steel Globe Valve No. 206-X. Screwed end. Union bonnet. Exelloy trimmings. For 3,000 pounds oil, gas, or water working pressures at atmospheric temperatures in lines not subject to shock. For refinery service at 600 pounds pressure at 750° F. (at left).

Forged Steel Angle Valve No. 207-X. Screwed end. Union bonnet. Exelloy trimmings. For 3,000 pounds oil, gas, or water working pressures at atmospheric temperatures in lines not subject to shock. For refinery service at 600 pounds pressure at 750° F. (at right).

+

The Arabian nights character who happened to release a powerful genie from a bottle, and kept it from destroying him and compelled it to serve him by coaxing it back in again, has a counterpart in the oil and gas industries of today. The genie of these modern industries is high pressures and temperatures. The bottles that protect from the destructive power of high pressures and temperatures and put their power to work are such forged steel valves and fittings as are here shown.

+

By no hit-or-miss methods could engineers and metallurgists have developed such tight, enduring bottles as these for oil, gas, or water under 3,000 pounds pressure at atmospheric temperatures and oil under 600 pounds pressures at temperatures of 750°. Seventy-six years of experience with the progress and needs of modern industry are reflected in their construction. Many years of scientific research into metal capacities under all conditions have gone into the forged steel of which they are made.

+

Both globe and gate valves are single forgings. Walls are uniform in thickness and the metal unusually dense. The gate valves are forged by a special process, which leaves a die finish on the inside, a particularly valuable feature where erosion and corrosion are severe. The only machining necessary is the boring out of the parts and threading of seat rings.

+

The discs are Exelloy, a non-rusting stainless iron having exceptional hardness, toughness, strength, and shock resisting qualities. Experience in service has proved it to be especially adapted to oil and gas use under high pressures and temperatures, as well as for other services. These gate valve discs are accurately guided in the body and ride down to a tight, true fit against the seat.

+

The Exelloy stem passes through non-corrosive bushings.

Forged Steel Horizontal Check Valve No. 208-X. Screwed end. Union bonnet. Exelloy trimmings. For 3,000 pounds oil, gas, or water working pressures at atmospheric temperatures in lines not subject to shock. For refinery service at 600 pounds pressure at 750° F. (at left).

Forged Steel Angle Check Valve No. 209-X. Screwed end. Union bonnet. Exelloy trimmings. For 3,000 pounds oil, gas, or water working pressures at atmospheric temperatures in lines not subject to shock. For refinery service at 600 pounds pressure at 750° F. (at right).

The stuffing box is liberally packed with highest grade packing. The principal features of design are used by Crane Co. exclusively, and have been proved in most exhaustive laboratory tests and in actual use under most exacting conditions.

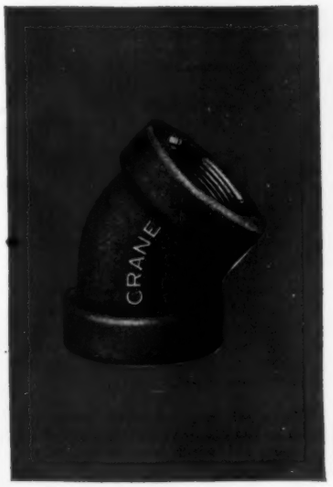
✝

Even to the hand-wheel, made of malleable iron instead of cast iron, every part is made with special knowledge of service conditions and especially adapted to the strains and stresses which it will meet.

✝

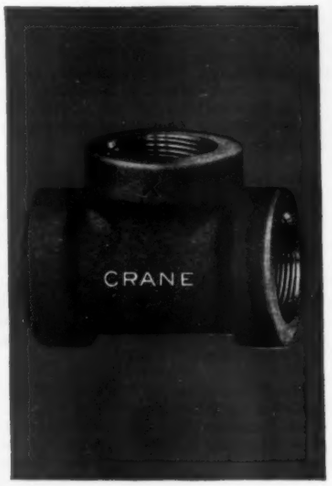
To supplement the complete line of forged steel valves are a full line of forged steel flanged unions, tees, elbows, and other fittings to meet all situations where such materials are advisable. These have been as carefully and skillfully designed as the valves.

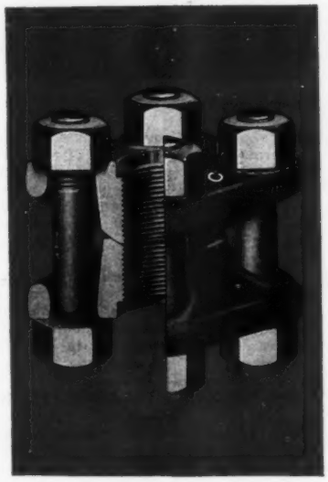
Forged Steel 90° Elbow No. 300-D. Screwed. For oil, gas, or water working pressures of 3,000 pounds at atmospheric temperatures in lines not subject to shock. For oil or steam working pressures of 900 pounds at 750° F. (at right).



Forged Steel 45° Elbow No. 302-D. Screwed. For oil, gas, or water working pressures of 3,000 pounds at atmospheric temperatures in lines not subject to shock. For oil or steam working pressures of 900 pounds at 750° F. (at left).

Forged Steel Tee No. 304-D. Screwed. For oil, gas, or water working pressures of 3,000 pounds at atmospheric temperatures in lines not subject to shock. For oil or steam working pressures of 900 pounds at 750° F. (at right).





Forged Steel Flanged Union No. 330-D. No gasket required. Cold rolled steel stud bolts with two nuts. For 6,000 pounds atmospheric oil, gas, or water working pressures. 900 pounds pressure at 750° F. 600 pounds at 900° F. Supplied with Triplex steel stud bolts for much higher pressures if desired. (at left).

When Crane forged steel materials are used to control the power genie that cracks your oil, that extracts the gasoline content from natural gas, that pushes oil and gas through 3,000 mile long pipe lines, you can be sure that the bottles that hold this genie are tight, dependable, safe.

✝

At strategic points throughout the country, Crane Co. keeps specialists in piping stationed, to give you experienced trustworthy advice on the selection of piping materials for any purpose. Call on them. No obligation on your part. On our part the strict obligation always to maintain the Crane reputation and highest standards of service.

CRANE

PIPING MATERIALS TO CONVEY AND CONTROL STEAM, LIQUIDS, OILS, GAS, CHEMICALS

CRANE CO., GENERAL OFFICES: 836 S. MICHIGAN AVENUE, CHICAGO
NEW YORK OFFICES: 23 WEST 44TH STREET
Branches and Sales Offices in Two Hundred Cities

Oil Industry Equipment and Supplies

INGERSOLL-RAND OFFERS GENERAL SERVICE PUMP

A new Cameron general service centrifugal pump, designated as the Class RV, is announced by Ingersoll-Rand Co., 11 Broadway, New York. Both the pump and the electric motor that drives it are

assembled together, producing a compact, lightweight, easily handled unit. This construction promotes dependability and reduces the need for attention by minimizing the number of revolving parts and bearings and eliminating the use of a coupling.

The Class RV is designed for any pumping service requiring a small or medium capacity unit for operation against moderate heads. It is suitable for such applications as circulating and cooling systems, standpipe and water supply systems in factories, warehouses and apartment buildings; and general transfer and handling service of any reasonably clear liquid.

This pump is made in six sizes and can be furnished mounted on a structural steel bedplate to facilitate installation, if desired. Detailed information regarding this pump can be obtained by writing the manufacturer.

WELDERS SUPPLY IN NEW HOME

The Welders Supply Co., Tulsa, is occupying its new home at 311 East Third Street, adjoining the old location. The new building is a brick and concrete structure, 50'x65', and two stories high, with display room, a welding demonstration room, and a welding shop provided with both electric and gas equipment. This company is distributor in the Mid-Continent Field for the Stoody Co., U&L Battery Corp., Modern Engineering Co., Wilson, Welder & Metals Co., and the Victor Welding Equipment Co. In addition to the home office in Tulsa, branch stores are maintained in Oklahoma City and in Dallas and Houston. C. B. Harter is president and general manager, G. R. McCullough, vice president, and W. L. Porter, secretary. Since its organization in November, 1925, the company has had a phenomenal growth.

RULES FOR "TOLEDO" CONTEST

The Toledo Pipe Threading Machine Co., Toledo, Ohio, has issued a broadside, available for all who ask for it, explaining the contest which it is conducting for 500-word letters on "Why timely purchase of new threading and cutting pipe tool equipment is sound business practice." Thirty-five attractive prizes are offered, the first being a "Toledo" No. 999 half-inch to 2-inch power pipe machine complete. The company says the contest is "to acquaint the trade with the tremendous savings that can be effected by keeping pipe tools in efficient operating condition at all times. We are sure that we will all be amazed at the startling facts that will be exposed in this unique contest."

The Dardelet Threadlock Corp., New York, has granted to the S. M. Jones Co. of Toledo, Ohio, a license to manufacture and sell sucker rods with the Dardelet self-locking screw threads.

NOTES ABOUT TRADE LITERATURE

The Duriron Co., Inc., Dayton, Ohio, has published an eight-page booklet devoted to Durimet and Durco Nirosta, giving special analyses, along with corrosion resistance and technical data.

The International Nickel Co., New York, is mailing a bulletin on "Ni-Resist," a special type of alloyed cast iron used in the chemical and allied industries.

"Hot Dope Kettles for Pipe Line Work," and "When There are Miles of Pipe Coating to Be Done," are titles of two new pieces of literature put out by Littleford Brothers, 457 East Pearl Street, Cincinnati, Ohio.

The Wright Manufacturing Co., Bridgeport, Conn., has issued a 48-page catalog on Wright electric hoists, which include hook and bolt suspension; plain, geared and motor-driven trolleys; and drum and low headroom types.

"Cheap oil may influence many producers to use cheap equipment, but cheap equipment has never been known to produce oil cheaply," says an interesting bulletin, "Facts About Lufkin Units," issued by the Lufkin Foundry & Machine Co., Lufkin, Tex.

How the Meaker well of the Penn-United Gas Co. in Tioga County, Pennsylvania, was brought under control through an expertly performed cementing job is told in the current number of Incor News, published by the International Cement Corp., New York.

"Boiler Water Conditioning," is a 16-page treatise just published by the Elgin Softener Corp., Elgin, Ill. This book, printed in two colors, discusses various problems in the conditioning or treatment of boiler water and is profusely illustrated.

The Brown Instrument Co., Philadelphia, Pa., has just published a new catalog containing the latest data on Brown automatic controls for temperatures, pressures, flows, liquid levels and other vital process operating factors. Tells how automatic controls help quality.

The American Meter Co. has released an attractive 36-page bulletin on meter provers and cubic foot standards for gas meters manufactured by the D. McDonald & Co. factory in Albany, N. Y. The bulletin includes complete data on the new 5 and 10-foot provers.

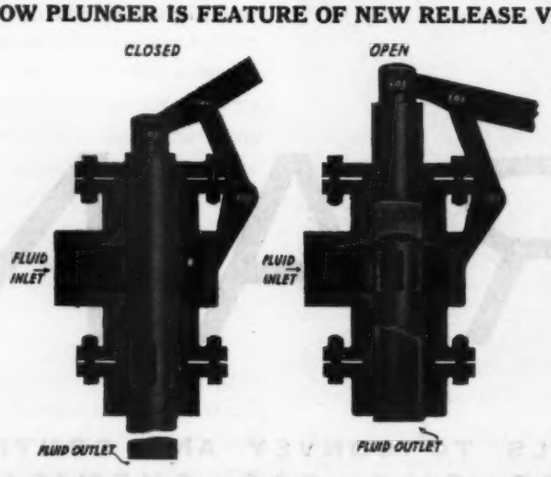
A bulletin, "Dieform Compression Fittings," is being distributed by the Bailey Meter Co., Cleveland, Ohio. This bulletin, designed as No. 13, describes the application, advantages and installation of Dieform compression fittings when used with copper or steel tubing for small service lines.

A 44-page book containing condensed data on pipe welding is offered by the Bastian-Blessing Co., 244-A East Ontario Street, Chicago. This supplement to the Oxy-Acetylene Welder's Handbook contains information for the piping contractor, heating contractor, welding instructors and others.

The following news bulletins have been issued by the National Airoil Burner Co., 1327 Girard Avenue, Philadelphia, Pa.: "How to Install Steam Atomizing Oil Burners," "Oil Burner Accessories," "Oil and Gas Combustion Units," "Indirect Rotary Oil Burners" and "Direct Rotary Oil Burners and Oil Burning Efficiency." The company also has published the eighth edition of "Oil Burning in Power Plants."

The June number of Black and White, published by E. F. Houghton & Co., 240 West Somerset Street, North Philadelphia, Pa., contains the following helpful articles: "Lubrication of Small Steam Turbines," "Diesel Motors Point Way to Transport Economy," "Rust Prevention During Shutdowns," "Curing Vertical Drive Troubles," "Advantages of Electric Metal Cleaning," "Power Plant Operating Economies" and "False Economy in Hydraulic Press Operation."

HOLLOW PLUNGER IS FEATURE OF NEW RELEASE VALVE



The Brauer Machine & Supply Co. of Oklahoma City announces a new release valve for rotary slush pumps and boiler blow-off lines. The feature of this valve is the hollow plunger, with fluid inlet ports, operating between two stuffing boxes. This has proved to be a distinct advantage. The pressure is equalized in the fluid chamber of the valve, and, with a lever handle the valve is easily and quickly opened and closed under any pressure. Further particulars may be had by writing to the company.

MEN KNOWN *in* THE EQUIPMENT FIELD

Five years ago Alfred F. Howe, then vice president and general sales manager of the Borden Co., Warren, Ohio, manufacturer of Beaver pipe tools, realized a plan which long had been in his

Alfred F. Howe

mind and he moved with his family to California. Idleness was out of the question, so like many others who yield to the lure of the Pacific slope he formed sales connections with eastern firms. In this field Mr. Howe still further broadened his circle of friends, which already was large.

Recently Mr. Howe returned to the Borden Co. as western sales manager, with headquarters at 717 Calmar Avenue, Oakland, Calif. From this point he will take care of the trade on the Pacific Coast as well as in Nevada and Arizona.

NEW MERCURY COLUMN GAUGE

The Amthor mercury column gauge made by the Amthor Testing Instrument Co., Inc., 309 Johnson Street, Brooklyn, N. Y., is recommended by the manufacturer for applications requiring the accurate and close measurement of low pressures and vacuum. The glass tube is protected from breakage by the U-shaped scale case. The mercury level stands out sharply against the white backing of the glass tube. The depressed black graduations and figures against the smooth aluminum finish of the scale present a clear and distinct reading, easily visible. All other parts are finished in heavy black enamel. Any one of the right, left or top connections on the mercury chamber can be used. All three are threaded for one-fourth-inch standard pipe thread.

BACON HEADS PUMP DIVISION

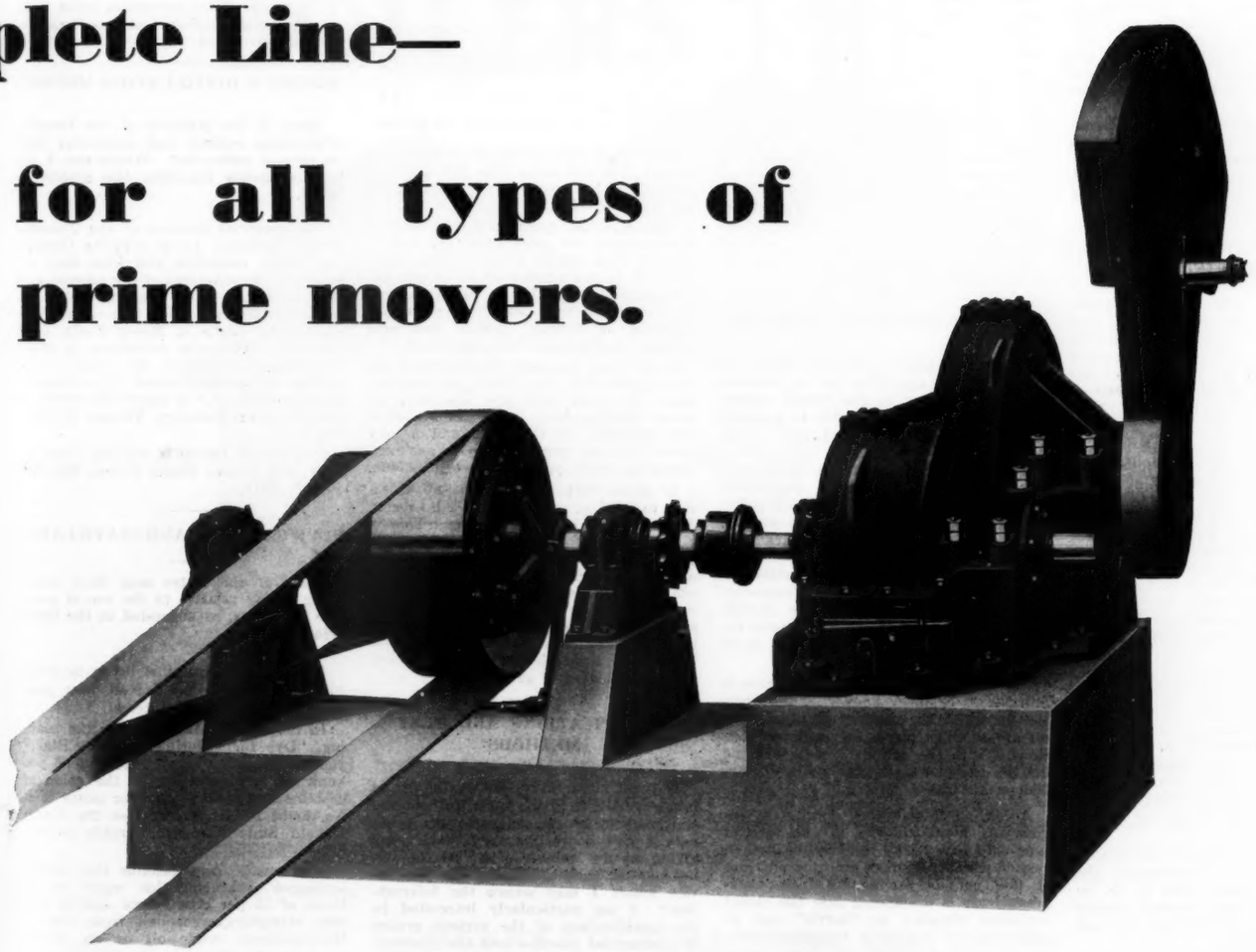
Fairbanks, Morse & Co., Chicago, has announced the appointment of R. H. Bacon, former advertising manager for the company, as manager of the pump sales division with headquarters in Chicago. Mr. Bacon has been associated with the company since 1925 when he took charge of publicity for the Diesel engine division. Shortly thereafter he was placed in charge of general publicity and since 1929 has been manager of the advertising and publicity department. He is a graduate electrical engineer, University of Illinois, '16.

UBLE REDUCTION

PING GEARS

plete Line—

for all types of prime movers.



PPLY COMPANIES

Technical Questions Answered

BY CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with the marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

CLEANERS NAPHTHA AND THE SPOT RING

Experimenting with a high grade naphtha for removing grease spots from fine garments we cannot be certain that a ring will not form about the spot after use of the naphtha. Do you know of any product that could be added to the naphtha to prevent this spot ring?—R. M. F.

The formation of a ring on a piece of cloth after the use of a cleaning solution is a natural result of the action of the solvent. This may be explained as due to two things, the concentration of the material soluble and the contrast between the cleaned portions and that which has not been acted upon. Nothing can be added to the naphtha to prevent these perfectly reasonable results. The usual practice is to treat the entire piece or garment with the solvent naphtha.

Commissioner Humphrey, of the Federal Trade Commission, in dissenting from the majority when dismissing a complaint charging misrepresentation of a cleaning fluid advertised as being capable of removing a spot from a fabric without leaving a ring, discussed this subject and his comments may be of special interest to you. They are quoted in part.

"The undisputed evidence shows that this preparation is substantially the same as several others, and is in no respect any better than several similar preparations on the market that are sold in competition with it.

"Practically all clothes or garments upon which cleaning preparations are used, are more or less soiled. That a preparation can be made that will produce a clean spot on a soiled cloth, and that no difference will be shown between the clean spot and the remaining part of the soiled garment, is not even claimed by the respondent. Such claim insults ordinary intelligence. The cleaner the spot and the more perfect the preparation, the greater the difference between the spot and the rest of the garment, and the plainer the ring. The virtue of the preparation has nothing whatever to do with the leaving of a ring. This is not only the undisputed evidence, but is common knowledge and common sense. The ring is always there. It is a question only of manipulation, and to so distribute by what is known as feathering the outer rim of the spot until it is not noticeable.

"There is no dispute as to what the evidence shows in regard to all of these propositions. The sole question in this case is whether the respondent imputes the removal of the ring to the virtue of its product. If the respondent does, then it is guilty of false and misleading practices. Let us see what some of the statements are in the advertising of respondent. It states, '——— is perfect and positive in its action. The trouble with most spot removers is that when they remove the spot they usually leave a ring.' I submit that that is a clear and positve statement to the effect that ——— does not leave a ring—which is absolutely untrue and which respondent itself admitted was false before the commission. 'The cleaning powers of ——— and not the rubbing is what removes the spot; therefore rub gently for successful results.' It will be seen by this statement that respondent admits that it is the rubbing that removes the ring and the preparation that removes the spot. In other words, in one part of its advertisements it flatly contradicts its statements in another. Again in its advertisements respondent says: '——— is different—a secret formula.' This is an absolute fraudulent and untrue statement and has been condemned over and over by the commission in other advertisements."

NEW ENGINE USING FUEL OIL

Have you any particulars about the Maine motor operating on a principle somewhat similar to the Diesel engine? My information is that this is a recent British invention.—A. T. L.

Invention of a new type of internal combustion engine said to accomplish with fuel oil the easily controlled power production obtained from steam was recently announced in London, states a report from Alfred Nutting, American Consulate, London, made public in March by the Department of Commerce. The engine was developed by Joseph Maine, designer of racing car chassis for Capt. Malcolm Campbell, British speed ace.

The main feature of the new engine is a separate chamber known as the "bottle" in which the combustion of air and oil spray takes place, the contents then flowing into the cylinders of the engine driving the pistons by the gentle expansion of the gases, it is said.

According to published details the engine has four cylinders of the vertical type used in internal combustion motors, two of which compress air to a pressure of 600 pounds per square inch. Compressed air is discharged into the closed explosion chamber or "bottle" and at predetermined periods a measured quantity of oil fuel is injected which immediately becomes ignited due to the high temperature of the air. The strength of the mixture is kept constantly equal by suitably proportioning the quantities of air and heavy oil discharged into the separate explosion chamber and by regulating a valve or throttle between the "bottle" and the engine.

It is declared by the inventor that this engine can "turn over" at a high rate of revolutions per minute, occupies little space, and is nearly standard in design so that internal combustion engines can be easily converted into this new type of producing power.

LIBERTY AERO OIL SPECIFICATIONS

Will you kindly advise the exact specifications of Grades 1, 2, 3, 4, Liberty Aero Oil? We do not find sufficient information in Technical Paper 323B to allow us to clearly define the four grades. For instance, the minimum flash of Grades 1 and 2 is the same as for 3 and 4. We note also that viscosities of 2 and 3 are of the same range. Is it permissible for any manufacturer to label his merchandise Liberty Aero providing such merchandise complies with the government specifications?—W. C. L.

The tabulation of the indicated desired properties of the four grades of Liberty Aero Oil, from page 19 of Technical Paper 323B, United States Bureau of Mines, will aid for distinguishing these oils.

Grade—	1	2	3	4
Vis. at 210°F.	75/85	90/100	90/100	115/125
Flash	400°F.	400°F.	450°F.	450°F.
Pour	15	30	45	45
Acidity	Neutralization number not above 0.10			
Emulsion ..	Water emulsion shall separate in 1 hour at 180°F.			
Carbon residue ..	1.5	2.0	2.5	2.5
Precipitation number ..	Not above 0.5 for all grades			

Acidity of neutralization number 0.10 means that not more than 0.1 mgm. of potassium hydroxide shall be required per gram of oil.

The A.S.T.M. precipitation number is a measure of the precipitate that may be formed when the oil is mixed with naphtha. It is the number of cc. of precipitate formed when 10 cc. of lubricating oil are mixed with 90 cc. of petroleum naphtha of definite quality and centrifuged under prescribed conditions.

A study of the properties as listed for each grade will show that the combinations are such that the oils may be easily distinguished. For example, while the viscosities of Grades 2 and 3 may cover the same range, differences are mentioned for flash, pour and carbon residue.

It seems that there can be no objection to labeling a lubricating oil Liberty Aero Oil if that is what it is. This is a recognized standard and a product so labeled could be identified by means of well known testing and chemical methods. It will be remembered that some years ago the Government specified a grade of gasoline known as Navy Gasoline and later this was changed to New Navy, both names being extensively used in the marketing of gasoline.

SPECIFICATIONS AND TEST METHODS

If the United States Bureau of Mines issues a bulletin giving specifications and test methods of various petroleum products I will appreciate very much your giving me the number of it. If they do not publish such a bulletin, can you advise where I may secure the information? I am particularly interested in the specifications of the various grades of commercial gasoline and the products obtained in the operation of a skimming plant.—H. T. O.

United States Government Master Specification for Lubricants and Liquid Fuels and Methods for Sampling and Testing is the title of Technical Paper 323B, which may be purchased for 15 cents from the Superintendent of Documents, Government Printing Office, Washington, D. C.

There are two gasolines mentioned in this bulletin that are used for motor fuels; two others are specified for aviation purposes. These are United States Government Motor Gasoline and Motor Fuel V. The motor gasoline must be sweet to the doctor test, pass the copper strip corrosion test, contain no more than 0.10 per cent total sulphur, and meet the required distillation range. The distillation range being—recovery of 10 per cent at 176° to 122° F., with the provision that for each per cent loss under 4 per cent, the minimum 10 per cent requirement shall be lowered 5.4° F. Not above 284° F. at 50 per cent over; not above 392° F. at 90 per cent; endpoint not above 437° F.

Motor Fuel V is a special grade which may be used by the Government for ambulances, fire engines, emergency vehicles, and other equipment under special conditions. The important specification for this fuel is volatility, as indicated by the distillation test, the endpoint must not exceed 401° F.

Aviation gasoline, fighting grade, requires that the endpoint shall not be above 329° F. The domestic grade requires an endpoint not higher than 374° F. Certain doctor, corrosion, color, gum, acidity, and sulphur test specifications are also required.

TRUMBLE DISTILLATION METHOD

What is the principle of the Trumble distillation method and apparatus used in several refineries? Where can I get printed matter regarding this system?—M. F.

The essential features of the Trumble process include: Large capacity through continuous operation and high heat efficiency. Descriptions of the process and the apparatus have been published in numerous places. There is a critical discussion by Leslie in Motor Fuels, page 178, etc. Numerous references to other descriptions are given by Leslie. The process is described under "The Simplex Refining Process," in Day's Handbook of the Petroleum Industry, Volume II, page 385.

The French Patent is 431,142, June 16, 1911, and United States Patent 996,736, July 5, 1911.

BLUE GASOLINE AND STATE LAWS

Some of the states may have something to say relative to the use of gasoline dyed blue, as suggested in the letter below.—Editor.

I am writing you this letter in order to prove to you that I read your page with a great deal of interest.

In the issue of May 7 under the heading, "Dye for Coloring Gasoline Blue," you made the statement that you do not know of any objection to the color of gasoline that is to be used for motor fuel. No doubt you have forgotten the North Dakota State law, which reads as follows:

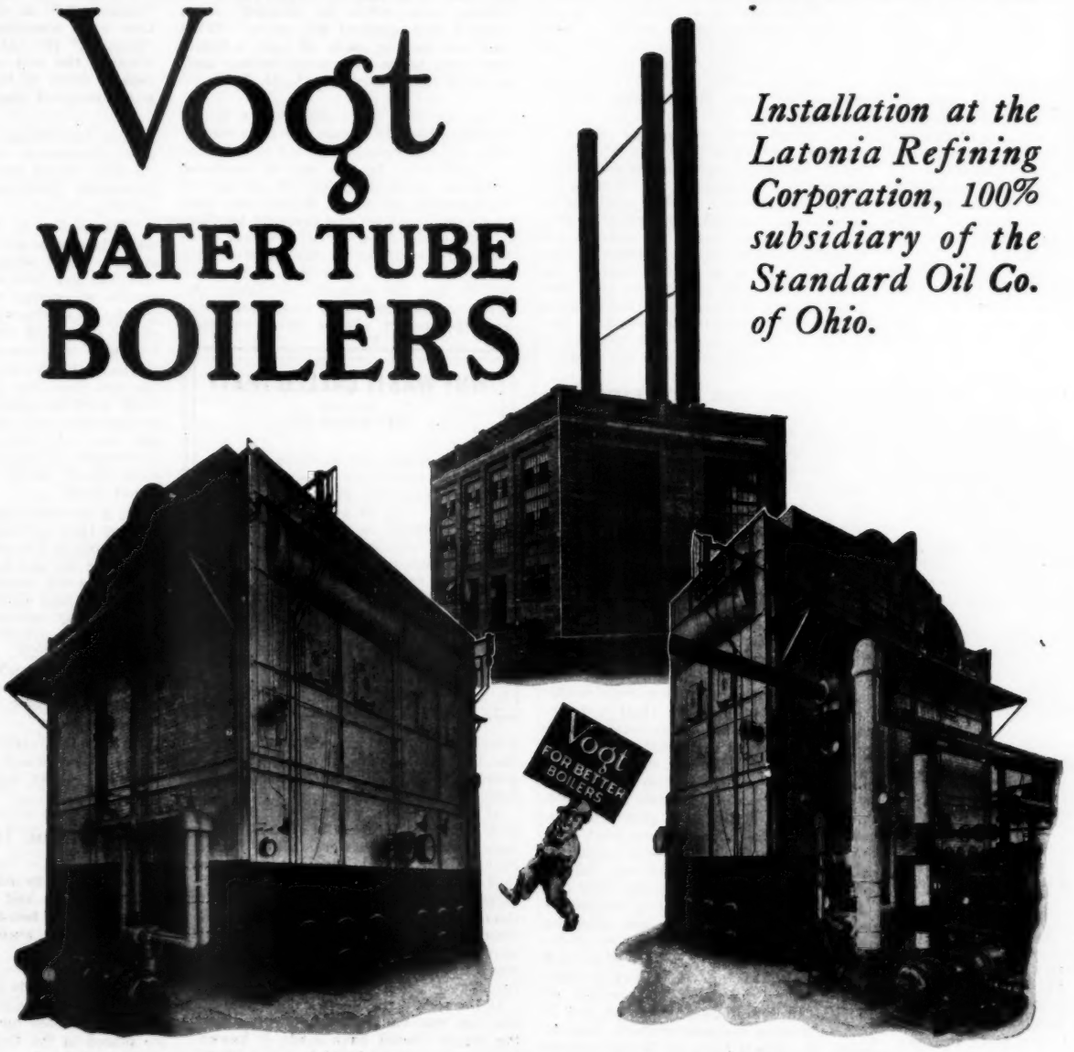
"Section 2. Any gasoline that shows antiknock characteristics equal to a blend of 25 per cent benzol and 75 per cent straightrun gasoline from typical Mid-Continent crude oil or its equivalent may be colored by the use of harmless red dye. Any gasoline not showing the antiknock characteristics specified above must be sold without the addition of any foreign coloring matter or shall be of such a color as may be required by the current specifications for North Dakota motor gasoline."

However, I understand that after July 1 this law will be changed and we will then be permitted to use any color we may desire. However, I am not sure that this change will permit the using of red dye on any gasoline that does not have an octane number of 60 or better.—J. A. S.

REFINERS ARE AMONG THE LARGEST USERS OF

Vogt WATER TUBE BOILERS

Installation at the Latonia Refining Corporation, 100% subsidiary of the Standard Oil Co. of Ohio.



Three 400 horse power four drum boilers, two in battery setting, deliver steam superheated as much as 30 deg. at the Latonia Refining Corporation, Latonia, Ky. Besides eliminating line and cylinder condensation, this slight superheat also eliminates carrying in suspension highly abrasive particles so injurious to valves, cylinders, turbines, etc. The above is one of many reasons why the Vogt four drum boiler is particularly suited to refinery service.

HENRY VOGT MACHINE CO.
INCORPORATED
LOUISVILLE, KY.

New York Chicago Philadelphia Cleveland Dallas

Manufacturers of: OIL REFINERY EQUIPMENT, DROP FORGED STEEL VALVES AND FITTINGS, WATER TUBE AND HORIZONTAL RETURN TUBULAR BOILERS, ICE MAKING AND REFRIGERATING MACHINERY.

Field Problems and Their Solution

EDITED BY THOMAS F. SMILEY

In order that men connected with the drilling, producing and transporting branches of the petroleum industry may procure quickly a solution of many problems confronting them from time to time in their work, The Oil and Gas Journal has arranged with leading engineers and other recognized authorities to answer questions submitted by readers of this publication pertaining to the work of drilling and producing crude oil and transporting this product.

Everyone is invited to submit questions freely. These questions will be submitted to proper authorities by Mr. Smiley, who edits the page, and answers, based on the best available information, will be published. Each question should give as much detail as possible, especially where it relates to matters where depths of sands, types of sands and operations on adjoining properties would have a bearing on the problem involved. The source of all questions will be considered as confidential and only initials will be published in connection with the question.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or practices which are improvements.

In case an immediate answer is important, one will be given by mail if the writer requests it.

DIVERTING DIRECTION OF HOLE

Please advise us whether it is possible to make a hole incline in the direction that we want it to in bed-rock. We have a hole that is 236 feet deep to bed-rock and we want to incline from there so that at 800 feet we would be 75 or 80 feet north of where the hole is started. We are wondering if this could be possible, drilling with a regular churn drill. —F. E. T.

Mechanically this can be done, but whether it would be economically worth while would have to be determined by the driller on the job. At best it would require much time and skill but with the modern methods of making underground surveys of holes it is possible to keep accurate records of the position of the bit at all times.

It is suggested that to divert the hole to the north as you wish it would be best first to case the 236 feet of hole now drilled and set a whipstock in the bottom of the casing so that it would be oriented in the desired direction, that is, the concave side of the whipstock would be turned toward the north and when the tools were run in after the whipstock had been placed they would start the hole in the desired direction.

After the hole is started toward the north it is necessary that it be surveyed at frequent intervals for it is likely that the tools will tend to straighten out and drill a vertical hole again.

If it is found that the hole is straightening it will be necessary to underream from the bottom of the 236 feet of casing first set to the point where it is necessary to use the whipstock again. It probably will be necessary to face the whipstock to suit the new angle to the hole.

After the hole is underreamed it will be necessary to run casing to the bottom and again attach the whipstock so oriented that the northerly direction will be maintained. In other words, the method used in making the first deflection from vertical would have to be followed each time the hole is straightened.

You can readily realize that drilling a hole under such conditions would not be easy, for although the angularity would be a little less than 10 degrees to give the required distance off bottom it would require a constant check to know that you were headed in the right direction at the proper inclination and this would necessitate slow drilling and constant checking.

It would seem as though, since the present hole is only 236 feet deep, it would be much simpler, quicker and more satisfactory to make a new location and drill straight down at that point. If rotary tools were used there would be little difficulty in deflecting the hole in any direction desired and continuing in that direction as far as desired and at any angle. Such work as this has been done in California in many wells drilled along the coast line where the derricks have been located on shore and drilled into the oil formation located out under the ocean.

TESTS FOR PIPE LINES

What tolerance is usually allowed in putting in a screw pipe line of 4 inches on the number of air leaks per mile when tested with 50 pounds of pressure? By air leaks we mean an air leak that can be heard 10 feet off when the line is tested with only 50 pounds pressure. What would you regard as the normal number of leaks at the collar per mile? This is a crude oil line and it will run at 900 pounds pressure.—R. W.

There do not appear to be any standard specifications for tests of pipe lines for either crude oil, gasoline or natural gas as each product seems to require that the pipe line to handle it shall be tested in a different manner. Furthermore each pipe line company has a different method of testing new lines and it is therefore not possible to give you an estimate of the normal amount of leaks at the collars per mile of line that should be permissible. In general, it is considered good pipe line practice to test each section of line as laid by sealing the ends of the pipe and then pumping the pipe line full of air at anywhere from 50 to 100 pounds pressure per square inch and allowing the line to stand for 24 hours under this condition. This type of test is used to determine the amount of drop in pressure that will occur in this section of the line in a full 24-hour period and if it is excessive a check of each joint is made. The line if built for 500 pounds or more working pressure should hold air at a pressure of 50 to 100 pounds with little drop in 24 hours.

In some cases the line is tested with water, but this is not done as much now as formerly for couplings and pipe have been improved so that it is safe to assume that the pipe and all fittings are good for a working pressure specified for the complete line, and the partial line test is more to check on construction work than for any other reason.

It would seem that if your line had leaks that could be heard 10 feet away when filled with air at 50 pounds pressure it would leak out practically all air within 24 hours which would constitute a failure at one or more of the joints and require a check of each joint to stop excessive leakage. It is true that pipe lines are buried when small leaks are known to exist because it has been found that in time these minor leaks will cease due to the sediment from the oil sealing them, but it hardly seems sensible to adopt such a practice when lines can be laid that will not leak if modern equipment is used.

RODS DROP FROM ELEVATOR

In an accident report recently turned in from one of our field bosses it is stated that "rod elevators dropped rods, and injury occurred to one of the cleanout crew in getting out of the way of the falling rods when he stepped on a wrench and sprained his ankle." What analysis may be made of such a report and steps taken to prevent further accidents of this general type?—D. J. T.

In the first place this report is not complete because it does not state clearly why the rod elevators failed to hold the rods securely. In this day of improved elevators such dropping of strings of rods should not occur if they are kept in proper condition and properly handled.

In the old days, when elevators were made in a company blacksmith shop, this might have been considered a complete report, but the industry no longer depends on the blocksmith to furnish tools, and the report should have indicated clearly the type of elevators used and if the failure was due primarily to using poorly designed elevators it should have been stated.

If the elevators were of the right design and failed because of poor repair or because the springs were full of dirt or paraffin the report should have shown that such a condition existed. If the repairs were made in a local shop care should have been exercised in the material selected and the inspection should have been complete enough to develop any weaknesses in the reconditioned elevators.

If the rods were forced out because the machine was handled like a pipe driver, the report should have made it known. Your company is entitled to a full knowledge of all conditions as they existed at the time of an accident so that propr steps may be taken to prevent a recurrence, and such reports will not only aid the safety department and production men in taking steps to remove the cause leading to such accidents, but if all the facts are clearly stated other employes will be forewarned of dangerous conditions and thereby be able to prevent them.

The foreman in charge of cleanout crews is responsible for the condition of the tools and for a clear floor space, which will tend to prevent accidents, but each man on the crew can do much for his own safety by determining on each job just where he will go in case anything comes down, and just how he will get there.

The American Petroleum Institute is doing a good work in preparing carefully thought out instructions on care in handling equipment and it is suggested that you write it for copies of the instructions for cleanout work. Address American Petroleum Institute, Division of Production, 1508 Kirby Building, Dallas, Tex.

WHY WAS IT CALLED THAT?

BUCKING IN

The process of screwing a joint of line pipe onto a joint already laid is called by pipe liners "bucking in." It is evident that the word "buck" is used here in the sense of butting or charging against something, as the pipe laying operation referred to involves guiding one joint against another and then screwing it home with tongs. When a joint has been bucked in properly the boss sometimes indicates the fact by announcing, "That's high."

WHERE DOES THE BALL STICK?

I would like to have an opinion on a point which has come up recently among a few of us oil men concerning the actions of a traveling valve in a pumping well when it becomes affected by gas, or "gas-locked." As you know, this condition can sometimes be remedied by "bumping" the valves. The question is whether the ball sticks up against the cage or down on its seat. What, if any, is the accepted theory?—W. P. J.

This interesting problem has caused much discussion. In a paper read before the Fort Worth meeting of the American Petroleum Institute, John A. Zublin stated:

"The action of free gas in pumping wells has been the subject of extensive studies, for it seems to be incomprehensive why gas, which is the most valuable source of energy for a flowing well, should be detrimental to the production of the same well when put on the pump.

"There is no necessity to consider particularly the distance between the standing and traveling valve as long as the fluid, such as water, which is almost incompressible and which contains no free gas, has to be pumped, but the situation is changed entirely when the same pump must lift oil which is an altogether different fluid.

"It is necessary to arrange these valves so that they will come as close together as possible at the end of the down stroke, otherwise the gas assembled between the two valves will remain between them, and due to its high elasticity and compressibility, simply expand and compress with every stroke, not allowing the valves to function correctly. Any air compressor illustrates how much care is given to this point and no cushion space at all is left between the piston, the intake and the discharge valve."

From this statement it is to be concluded that the ball is stuck against its seat rather than against the top of the cage.

BENEFITS OF THE FLOW BEAN

I would like to ask you what is meant by a flow bean and the flow bean method. Just what benefits are obtained by using the flow bean method in producing oil?—U. K. O.

The flow bean is a device widely used in controlling pressure in flush oil fields. It is a restricted opening in a steel nipple placed in the flow line, usually close to the well head and upstream from the oil and gas separator. It has been used in some cases at the bottom of the flow line, but because of the difficulty of placing it, it is rarely used at this point.

The size of opening to be used to obtain the most efficient control from this method is determined by preliminary trial with beans of different sizes. As the well declines adjustments are made in the size to compensate for the changes in the flowing conditions of the well.

This method of control has its greatest value in the initial period of a well when the flush production is large. It also has a great potential value in connection with other control methods. When efficiently applied, the following claims for the flow bean method of control are made:

1. Gas-oil ratio can be held at a minimum or other controlled value with slight, if any, reduction in daily petroleum production.
2. Petroleum decline is steadied with increase in ultimate indicated.
3. Lifting costs are reduced.
4. Water encroachment is retarded.

Oklahoma Gross Production, First Quarter, 1931

GROSS PRODUCTION REPORT FOR FIRST QUARTER OF 1931, SHOWING ALL PRODUCTION OVER $5,000 AND ALL ROYALTY OF $2,000 AND UPWARDS; NAMES WITH (*) OPPOSITE REPRESENT ROYALTY OWNERS, THOSE WITHOUT ARE PRODUCERS.

Name and address—	Barrels	M. ft. gas	Amount
A			
Amerada Petroleum Corp., Tulsa	513,729.50	.....	$475,708.94
Amerada Petroleum Corp., Tulsa	.....	1,036,607	17,902.59
Amerada Petroleum Corp.,* Tulsa	.....	252,808	2,642.50
Atlantic Oil Producing Co., Dallas, Tex.	157,276.04	.....	136,393.07
Atlantic Oil Producing Co., Dallas, Tex.	.....	243,378	4,361.99
Atlantic Oil Producing Co.,* Dallas, Tex.	6,164.89	.....	5,741.97
Atlantic Oil Producing Co.,* Dallas, Tex.	.....	3,054	208.55
Accumulative Royalties Corp.,* Tulsa	8,045.22	.....	7,495.54
Accumulative Royalties Corp.,* Tulsa	.....	Gas	284.00
Acme Royalty Co.,* Ardmore	3,083.74	.....	2,683.53
Acme Royalty Co.,* Ardmore	.....	Gas	153.22
Adams Royalty Co.,* Chicago, Ill.	Oil	.....	31,812.26
Adams Royalty Co.,* Chicago, Ill.	.....	Gas	3,280.07
Alco Royalties Corp., Tulsa	.....	115,167	8,972.30
Alco Royalties Corp., Tulsa	144.86	.....	155.01
American Indian Royalties, Inc.,* St. Louis, Mo.	.....	.....	2,493.67
Argo Oil Co., Denver, Colo.,	25,450.91	.....	23,996.72
Alques Oil Co., Cushing	.....	84,579	5,074.75
Alma Petroleum Co., Oklahoma City	860.36	.....	639.51
Alma Petroleum Co., Oklahoma City	.....	93,971	8,078.34
Alma Royalties Corp.,* New York, N. Y.	.....	.....	4,981.13
Atkinson, William H.,* Oklahoma City	.....	.....	24,972.01
Apple, S. A.,* Oklahoma City	.....	.....	6,986.54
Abraham, Joe, estate,* Bristow	.....	.....	3,320.61
Anglin, J. A.,* Tecumseh	.....	.....	3,044.45
Anderson, Hattie E.,* Earlsboro	30,959.24	.....	45,877.14
Anderson, C. L., and estate of C. L. Anderson, Los Angeles, Calif.	54,578.41	.....	35,587.98
Anderson, A. C.,* Oklahoma City	.....	.....	2,836.96
Anderson, D. Harriett,* Earlsboro	10,173.97	.....	13,536.62
American Oil & Refining Co., Oklahoma City	.....	.....	14,117.73
Anderson-Prichard Co., Oklahoma City	95,975.20	Gas	75,457.02
Anderson-Prichard, by Slick Urschel, Inc., Oklahoma City	19,320.76	.....	16,235.35
Anderson-Prichard, by Slick Urschel, Inc., Oklahoma City	.....	54,478	541.24
Anderson-Prichard, by T. B. Slick estate, Oklahoma City	11,757.01	.....	11,739.38
Atkinson, William H., by Slick-Urschel, Inc., Oklahoma City	110,605.44	.....	98,663.96
Atkinson, William H., by Slick-Urschel, Inc., Oklahoma City	.....	Gas	2,674.86
Atkinson, William H., by Slick-Urschel, Inc., Oklahoma City	.....	.....	4,170.27
Arthur Oil Co., Sistersville, W. Va.	5,728.36	.....	4,916.48
Arthur Oil Co., Sistersville, W. Va.	.....	Gas	555.65
B			
Barnsdall Oil Co., Tulsa	411,417.86	.....	352,373.22
Barnsdall Oil Co., Tulsa	.....	Gas	7,779.36
Beico Royalties, Inc.,* New York, N. Y.	13,323.99	.....	14,412.28
Blackwell Oil & Gas Co., Cushing (No amt. given)	.....	.....	192,655.95
Bullock Oil Co., Oklahoma City	83,140.60	.....	78,117.41
Bullock Oil Co., Oklahoma City	.....	81,562	585.69
Barbara Oil Co., Chicago, Ill.	4,892.56	.....	3,757.76
Barbara Oil Co., Chicago, Ill.	.....	36,278	1,460.69
Buell-Herndon & Co., inc., Tulsa	25,811.46	.....	27,667.35
Buell, J. Garfield, Tulsa	2,492.82	.....	2,383.36
British-American Oil Production Co., Tulsa	111,953.05	.....	96,892.04
Bilbo Oil Corp., Madill	8,118.11	.....	8,571.22
Bart Royalty Co.,* Bartlesville	.....	.....	4,901.22
Bryan Petroleum Co., Tulsa	5,758.82	.....	5,394.30
Bryan Petroleum Co., Tulsa	.....	37,864	4,130.13
Benedum-Trees Oil Co., Pittsburgh, Pa.	66,354.87	.....	59,089.98
Bay State Oil & Gas Co., Kansas City, Mo.	11,022.36	.....	10,450.80
Black-Sivalls & Bryson, Inc., Bartlesville	4,179.30	.....	3,253.74
Burke-Greis Oil Co., Tulsa	Oil	.....	73,807.90
Burke-Greis Oil Co., Tulsa	.....	Gas	13,337.78
Burke-Greis Oil Co.,* Tulsa	.....	.....	3,566.94
Brown-Barrett Oil Co., Production Trust No. 2, by Federal National Bank, trustee, Shawnee	16,630.24	.....	14,450.73
Brown-Barrett Oil Co., Production Trust No. 2, by Federal National Bank, trustee, Shawnee	.....	95,784	707.30
Brown-Barrett Oil Co., Production Trust No. 2, by Federal National Bank, trustee,* Shawnee	27,094.93	.....	23,228.27
Brown-Barrett Oil Co., Production Trust No. 2, by Federal National Bank, trustee,* Shawnee	.....	Gas	497.23
Brown, Isabel and J. F.,* Oklahoma City	.....	.....	2,900.77
Brown, L. J., and Lizzie,* Seminole	.....	.....	2,004.00
Bradley, Edwin G., Wichita, Kans.	12,540.46	12,544	11,766.00
Bradley, Edwin G., Wichita, Kans.	1,932.35	.....	1,632.06
Bank of America National Association, trustee, J. Edward Jones Royalty Trust,* New York, N. Y.	.....	.....	2,737.83
Baker and Strawn, Tulsa	6,566.01	29,132	5,252.46
Baker and Strawn, T. N. Berry, Stillwater	.....	.....	4,862.52
Bullock, H. E.,* Chicago, Ill.	.....	.....	11,300.27
Born, H. A., Little Rock, Ark.	.....	.....	6,774.97
Bissett-Lytle and Gray, Tulsa	12,024.11	.....	9,226.58
Buttram, Frank,* Oklahoma City	.....	.....	6,277.04
Bole, George S., Tulsa	6,034.38	10,154	5,036.03
Bradshaw, Bob, trustee, Tulsa	15,769.19	.....	13,787.19
Berry, G. M.,* Pawnee	.....	.....	3,169.55
Billington, C. B.,* Shawnee	.....	.....	6,423.68
Blank, E. J.,* Cushing	.....	.....	9,277.78
Blue, J. O., and Ella S.,* Winfield, Kans.	.....	.....	2,416.58
Beck, O. V.,* Nocona, Tex.	48,458.40	.....	38,875.98
Burton, Elisa,* Seminole	.....	.....	2,630.31
Brandenburg Brothers,* Norman	Oil	.....	15,939.50
Brandenburg Brothers,* Norman	.....	Gas	582.42
Butler, Iola,* Stratford	.....	.....	2,706.94
Bash, J. H.,* Oklahoma City	52,842.93	.....	48,220.83
Boring, O. M., and Effie,* Hobart	.....	.....	7,067.39
British-American Production Co., Tulsa (third and fourth quarter, 1930, and first quarter, 1931)	105,764.66	.....	118,356.03
C			
Champlin Refining Co., Enid	148,256.20	.....	112,740.84
Champlin Refining Co., Enid	.....	335,225	21,159.39
Champlin Refining Co., Enid	138,648.96	.....	88,276.07
Cromwell-Franklin Oil Co., Oklahoma City	.....	184,993	215.30
Cromwell-Franklin Oil Co., Oklahoma City	83,507.44	.....	70,562.02
Cromwell-Franklin Oil Co., Oklahoma City (fourth quarter of 1930, not previously reported)	147,953.51	.....	167,395.98
Cromwell-Franklin Oil Co., Oklahoma City (fourth quarter of 1930, not previously reported)	.....	456,369	2,532.28
Carter Oil Co., Tulsa	1,645,418.27	.....	1,418,159.93
Carter Oil Co., Tulsa	.....	Gas	83,578.00
Carter Oil Co., Tulsa (suspense)	.....	.....	14,595.34
Continental Oil Co., Ponca City	397,554.99	.....	361,339.42
Continental Oil Co., Ponca City	.....	1,426,405	78,841.13
Comar Oil Co., St. Louis	348,281.39	.....	330,132.26
Comar Oil Co., St. Louis	.....	353,511	12,359.09
Cities Service Gas Co., Bartlesville	.....	361,087	28,459.38
Crosbie, J. E., Inc., Tulsa	9,636.49	.....	8,396.36
Crosbie, J. E., Inc., Tulsa	5,098.22	.....	3,330.99
Crosbie, J. E., and Crosbie & Robinson, Tulsa	13,040.39	.....	11,352.57
Crosbie, J. E., Inc., Tulsa	1,671.18	.....	1,585.76
Crosbie, J. E., Inc., Tulsa	503.21	.....	437.10
Crosbie, J. E., Inc., Tulsa	.....	3,446	306.80
Crosbie, J. E., Inc., Tulsa	.....	156,621	732.56
Coline Oil Corp., Oklahoma City	174,322.42	.....	148,109.61
Coline Oil Corp., Oklahoma City	.....	1,036,533	14,983.74
Century Petroleum Co., by receivers, Oklahoma City	51,013.32	.....	25,118.11
Chatham Oil Co., Tulsa	58,702.66	.....	51,971.55
Classen Co.,* Oklahoma City	41,123.43	.....	36,228.50
Capitol Producing & Refining Co., Oklahoma City	42,477.18	.....	37,610.16
Cortes Oil Co.,* Tulsa	2,091.95	.....	2,331.72
Cortes Oil Co., Tulsa	.....	.....	1,187.32
Cudahy Oil Co., Cleveland, Ohio	10,692.07	.....	7,548.73
Cosden, J. S., Inc., of Oklahoma, by receivers	59,824.11	.....	53,214.63
Cosden, J. S., Inc., of Oklahoma, by receivers	.....	Gas	2,038.02
Consolidated Gas Utilities Co., Oklahoma City	5,640.73	448,499	39,006.08
Classen Co.,* Oklahoma City	10,174.60	.....	10,235.93
Central States Production Corp., Tulsa	.....	165,926	9,741.82
Chestnut, O. G.,* Oklahoma City	.....	.....	3,632.07
Cochran, A. D.,* Okmulgee	5,069.09	.....	4,075.39
Cochran, A. D., Okmulgee	.....	Gas	160.55
Clark & Cowden, Duncan	4,653.03	.....	7,719.17
Collins, June H.,* Tulsa	3,040.12	.....	3,287.76
Clauer, Jennie,* Galena, Ill.	.....	.....	5,246.37
Carrico, Hattie B.,* Oklahoma City	.....	.....	2,483.37
Combs, Joe A.,* Las Cruces, N. Mex.	.....	.....	4,844.71
Cruce, M. K.,* Oklahoma City	.....	.....	2,457.23
Cox, Edwin B., and Jake L. Hamon, Ardmore	.....	.....	7,570.01
Cornell, Herman C., trustee,* Tulsa	.....	.....	2,097.36
Campbell, F. D., trustee, Raymondville, Tex.	.....	.....	8,409.84
Clubb, I. M.,* Kaw City	.....	.....	3,322.03
Clubb, Laura A.,* Tulsa	3,473.87	Gas	3,384.05
Crane, T. R., trustee,* Mannford	.....	.....	3,032.11
Cherry, Mrs. Clara,* Shawnee	.....	.....	2,172.98
Cline, William S.,* Newkirk	.....	.....	2,098.93
Cline, William S., trustee,* Newkirk	.....	.....	1,466.25
Connelly, G. W., Caney, Kans.	.....	.....	5,661.27
Collis Oil Co.,* Tulsa	.....	.....	2,135.69
Cook, William Jones, trustee, Muskogee	6,502.22	.....	6,293.11
D			
Deep Rock Oil Corp.,* Tulsa	.....	.....	17,460.34
Deep Rock Oil & Refining Co., Tulsa	8,516.08	.....	7,888.71
Deep Rock Oil & Refining Co., Tulsa	.....	Gas	604.33
Deep Rock Oil & Refining Co., Tulsa	423,425.40	.....	387,670.42
Deep Rock Oil & Refining Co., Tulsa	.....	314,815	21,814.69
Deep Rock Oil & Refining Co., Tulsa	.....	C.H.	8,735.83
Deep Rock Oil & Refining Co., Tulsa (suspense)	.....	.....	5,978.26
Duncan-Wichita Falls Pipe Line Co., Wichita Falls, Tex.	10,452.77	.....	7,827.05
Delaware Consolidated Oil Co., Tulsa	46,463.96	.....	33,349.13
Dengail Oil & Gas, Oklahoma City	32,133.56	.....	51,734.79
Delmar Oil Co., Bartlesville	11,730.79	.....	10,192.46
Delmar Oil Co., Bartlesville	.....	C.H.53,504	1,005.47
Devonian Oil Co., Tulsa	94,418.04	.....	86,417.09
Devonian Oil Co., Tulsa	.....	Gas	4,740.00
Doss Oil Royalty Co.,* Oklahoma City	7,187.83	Gas	5,924.03
Dunmar Oil Co., Duncan	9,531.79	.....	7,889.72
Denver Prod. & Ref. Co.,* Oklahoma City	10,992.09	.....	10,005.31
Denver Prod. & Ref. Co.,* Oklahoma City	.....	Gas	92.72
Denver Prod. & Ref. Co., Oklahoma City	42,230.56	.....	38,542.43
Darby Lynde Co., Tulsa	.....	120,062	2,556.69
Darby Lynde Co., Tulsa	65,248.78	.....	61,192.87
Darby Petroleum Corp., Tulsa	245,485.05	211,673	215,639.67
Davis, B. F.,* Wewoka	.....	.....	32,864.26
Dillard, J. H., estate,* Ardmore	.....	.....	2,930.90
Dillard, Mrs. V. E.,* Ardmore	.....	.....	3,780.39
Dunn, R. L.,* Oklahoma City	.....	.....	2,247.93
Dilley, W. Y., trustee,* Waurika	3,554.93	117	2,134.00
Dannsenther, Lewis A.,* Oklahoma City	.....	.....	2,081.15
Davidson, Thomas H.,* Okmulgee	.....	.....	2,644.98
E			
Empire Oil & Refining Co., Bartlesville	380,332.52	.....	337,664.66
Empire Oil & Refining Co., Bartlesville	.....	54,150 C.H.458,595	10,245.90
Empire Oil & Refining Co., Bartlesville (suspense)	.....	.....	52,333.26
Empire Oil & Refining Co.,* Bartlesville (suspense)	.....	.....	23,496.55
Empire Oil & Refining Co.,* Bartlesville	12,668.42	.....	13,084.30
Eason Oil Co., Enid	144,477.51	.....	113,949.47
Eason Oil Co.,* Enid	9,388.72	.....	9,165.83
Eagle-Picher Mining & Smelting Co., Henryetta	2,130.43	73,629	6,349.93
Elm Oil Co., Tulsa	9,223.20	.....	7,609.16
Elm Oil Co., Tulsa	.....	7,235	107.13
Engineers Royalties, Inc.,* New York, N. Y.	.....	.....	1,725.29
Eastern Royalties Corp.,* New York, N. Y.	.....	.....	1,897.41
Earlsboro Prod. Trust No. 2, Tulsa	8,807.50	.....	6,891.80
Equitable Royalty Corp.,* Oklahoma City	.....	.....	2,285.67
Eckroat Addition Royalty Owners,* by First Natl. Bank	4,558.38	.....	4,691.08
Eckroat Addition Royalty Owners, by First Natl. Bank	6,974.06	.....	6,116.71
Eaves, Samuel A.,* Wynnewood	.....	.....	3,144.44
F			
Franklin, Wirt, Ardmore	508,220.95	.....	406,761.11
Franklin, Wirt, Ardmore	.....	Gas	32,169.75
Franklin, Wirt, Ardmore	56,029.11	.....	52,640.78
Franklin, Wirt, Ardmore	.....	Gas	5,172.31
Franklin, Wirt,* Ardmore	8,420.95	Gas	7,506.04
Franklin, Wirt, by Liberty Natl. Bank, Ardmore	2,872.92	.....	2,476.22
Foster & Davis, Inc., Bartlesville	.....	C.H.	114.44
Foster & Davis, Inc., Bartlesville	6,024.31	.....	4,692.83
Franco-Canadian Royalty, Inc.,* Toronto, Canada	.....	.....	9,354.93
Franchot, D. W., & Co., Tulsa	23,921.31	.....	19,567.81
Farlyn Oil Co., Houston, Tex.	11,527.29	.....	9,605.66
Fern Oil Co., Yale	6,763.00	.....	6,314.07
Finance Oil Co., Gowanda, N. Y.	8,428.38	.....	6,973.68
Fleet, John,* Ada	.....	.....	2,756.76
Fleet, D. F.,* Ada	.....	.....	10,863.04
Fleet,* Ada (several accounts)	.....	.....	4,273.34
Fleet, D. F., John J. Fleet and W. B. Osborn,* Ada	.....	.....	5,468.57
Franks, J. S., trustee, Oklahoma City	.....	.....	19,548.37
Fidelity Royalty Co.,* Oklahoma City	.....	.....	3,306.30
Farley, G. W.,* Oklahoma City	.....	.....	2,806.81
Foster, Willard, estate,* Tulsa	.....	.....	2,793.18
Fore, J. C.,* Wewoka	.....	.....	3,428.21
Farwell, K. C.,* Chickasha	.....	.....	1,994.61
Faye-Katherine and Louise Farwell, Chickasha	.....	.....	639.10
Flanagan, J. F.,* Tulsa	.....	.....	2,938.82
G			
Gypsy Oil Co., Tulsa	1,720,682.49	.....	1,591,422.82
Gypsy Oil Co., Tulsa	117,802.37	.....	105,821.37
Gypsy Oil Co., Tulsa	.....	44,058	1,053.50
Gypsy Oil Co., Tulsa	.....	2,128,265	67,786.30
Gypsy Oil Co., Tulsa	.....	165,863	8,010.60
Gypsy Oil Co., paid for others, Tulsa	.....	.....	7,931.67
Gypsy Oil Co., Tulsa (suspense)	.....	.....	42,481.67
Grieves, John B., Terlton	.....	.....	9,943.03

(Continued on next page)

REVOLUTIONIZING TRUCK VALUES

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1½ TON REO SPEED WAGON

By actual comparison **the new SPEED WAGONS surpass all commercial vehicles in the lowest price 1½-ton field!**

Equipped with heavy, powerful truck type 4 or 6 cylinder engines!—each having *more* bearings and *larger* bearings than any competitive engine! And Reo's maximum piston displacements give abundant power!

The REO cylinder blocks are cast of chrome nickel iron, actually *7 times longer wearing* than the usual grey iron! Pressure lubrication forces oil constantly to all vital engine parts, *even to the piston pins!* Frames in the new SPEED WAGONS are 7" deep! The brakes are *hydraulic,* fully enclosed, weatherproof, safe!

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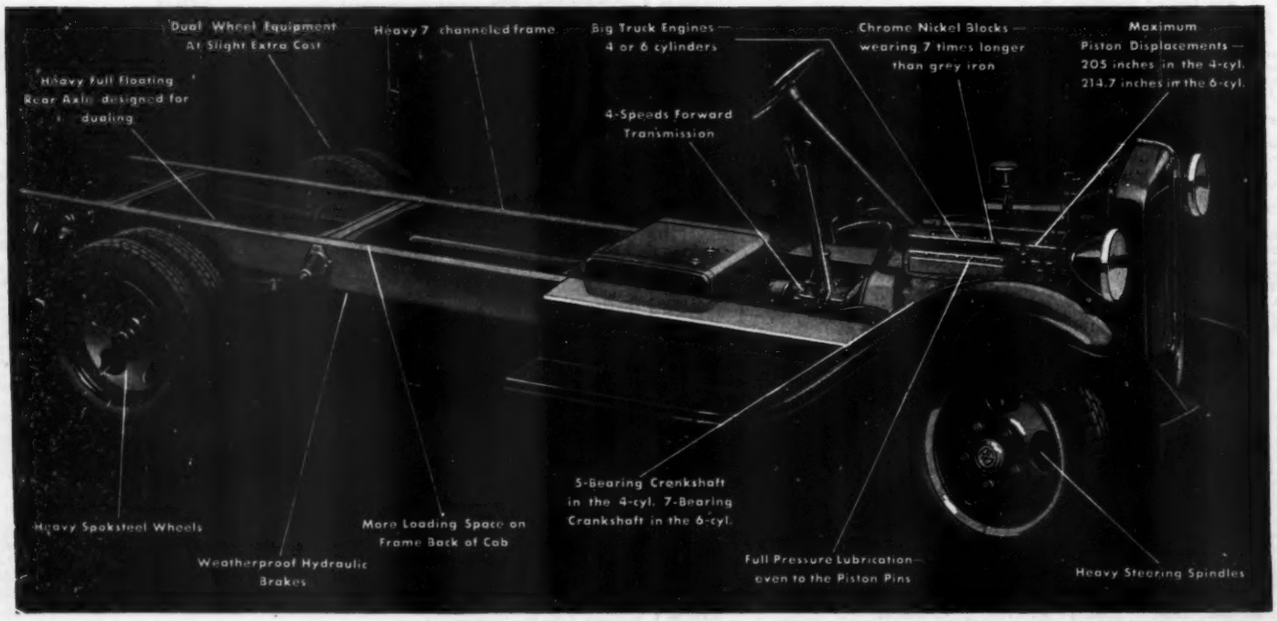
Four-Cylinder $625, Six-Cylinder $725
Chassis f. o. b. Lansing, Michigan
DUAL WHEELS EXTRA


Dual Wheel Equipment At Slight Extra Cost
Heavy 7 channeled frame
Big Truck Engines—4 or 6 cylinders
Chrome Nickel Blocks—wearing 7 times longer than grey iron
Maximum Piston Displacements—205 inches in the 4-cyl. 214.7 inches in the 6-cyl.
Heavy Full Floating Rear Axle designed for dueling
4-Speeds Forward Transmission
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Heavy Spoksteel Wheels
More Loading Space on Frame Back of Cab
Weatherproof Hydraulic Brakes
Full Pressure Lubrication—even to the Piston Pins
Heavy Steering Spindles

REO MOTOR CAR COMPANY, LANSING • TORONTO

OKLAHOMA GROSS PRODUCTION, FIRST QUARTER, 1931

Name and address—	Barrels	M. ft. gas	Amount
Goudie, A. R., and Allen B. Shantz,* Kitchener, Ontario, Canada	.....	.....	2,951.72
Gled Oil Co., Tulsa	28,783.78	.....	25,588.52
Gates Oil Co., Ardmore	8,9?2.07	.....	6,494.53
Guaranty Trust Co. of New York,* New York City	.....	.....	6,502.27
Gilmer Oil Co., Ardmore	29,342.72	.....	21,462.19
Galer Oil Co.,* Tulsa	.....	.....	2,742.80
Gilcrease Oil Co., Tulsa	18,401.25	.....	11,864.96
Graokla Gas Co., Wichita Falls, Tex.	28,719.17	.....	21,553.82
Graokla Gas Co., Wich.ta Falls, Tex.	.....	12,104	1,210.33
Goddard Co.,* Ardmore	10,539.04	.....	6,443.16
Goddard Co., Ardmore	2,449.22	.....	2,170.66
Grisso Royalty Corp.,* Enid	.....	.....	2,954.16
Grisso, W. E.,* Seminole	Oil	.....	10,341.42
Grisso, W. E., Seminole	.....	Gas	505.98
Gillespie, F. A., & Sons, Tulsa	14,863.01	.....	10,616.55
Grimes and Gillespie, Tulsa	9,432.33	.....	7,720.32
Getzelman, B. C.,* Algonquin, Ill.	.....	.....	4,092.29
Goffatt, W. C., trustee,* Toronto, Canada	.....	.....	11,706.39
Gibson, Edwin S.,* San Benito, Tex.	.....	.....	5,767.78
Gant, Walter H., and Knox L. Garvin, Ardmore	.....	.....	5,318.67
Glass, J. Wood,* Nowata	5,355.38	.....	4,249.28
Glass & Harmon, Nowata	10,601.60	.....	8,811.28
H			
Houston Oil Co. of Texas, Houston, Tex.	24,606.55	.....	22,180.38
Houston Oil Co. of Texas, Houston, Tex.	.....	22,193	509.23
Home Stake Oil & Gas, Tulsa	Oil	.....	41,482.80
Home Stake Oil & Gas, Tulsa	.....	Gas	2,458.70
Home Stake Royalty Corp.,* Tulsa	.....	.....	5,934.67
Home Stake Royalty Corp., Tulsa	.....	.....	2,441.67
Hales, W. T., Oklahoma City	32,745.45	.....	26,153.75
Hales, W. T., Oklahoma City	.....	36,308	1,308.97
Harland Oil Co., Waico	13,684.73	.....	9,483.19
Harland Oil Co., Waico	.....	59,062	1,605.13
Highway Oil Refining, Tulsa	20,125.21	.....	18,941.02
Highway Oil Refin.ng, Tulsa	.....	6,929	175.18
Hull, J. A., Co., Tulsa	25,435.02	.....	24,068.09
Hull, J. A., Co., Tulsa	.....	21,280	280.23
Hall & Briscoe, Inc.,* Oklahoma City	30,253.29	.....	15,126.64
Harmon, C. C., Nowata	9,610.62	.....	8,007.30
Harmon, C. C., Nowata	2,730.43	.....	2,287.23
Harmon & Reed, Nowata	5,677.50	.....	4,628.55
Harmon & Glass, Nowata	10,601.60	.....	8,811.28
Harmon, Robertson & Glass, Nowata	3,293.74	.....	2,578.63
Heenan-Coe Co., Oklahoma City	44,870.30	.....	42,475.74
Heenan-Coe Co.,* Oklahoma City	.....	.....	3,310.11
Hay-McClure, Inc., Peoria, Ill.	7,725.30	.....	7,106.05
Hay-McClure, Inc., Peoria, Ill.	.....	Gas	336.68
Hemlock Oil Co.,* Tulsa	.....	.....	4,041.67
Harris & Baun, Inc., Blackwell	Oil	.....	8,549.13
Harris & Baun, Inc., Blackwell	.....	Gas and C.H.	1,958.74
Harris, E. L., trustee,* Tulsa	.....	.....	4,268.06
Harris, E. L., Tulsa	.....	.....	8,837.77
Home Gas Co. of Cushing, Cushing	9,266.37	.....	13,695.89
Harber & Riddle, Inc.,* Seminole	.....	.....	3,047.65
Hall, J. E.,* Holdenville	.....	.....	6,764.48
Houghton Royalties Co.,* Oklahoma City	.....	.....	4,714.50
Hall, E. D.,* Wetumka	.....	.....	3,422.55
Hayes, Elizabeth Crockett, Oklahoma City	.....	.....	5,893.45
Hayes, S. W., Oklahoma City	.....	.....	13,260.89
Hefner Co.,* Oklahoma City	.....	.....	3,088.73
Hascock, J. E., Blackwell	.....	.....	8,992.19
Horton, A. H., agent,* Hawarden, Iowa	3,073.38	.....	2,405.52
Hudson, Hargrove,* Tulsa	.....	.....	2,117.62
Holmes, Jeanette Lewis,* Oklahoma City	.....	.....	14,032.29
Haskell, Frank, agent, Tulsa	8,945.38	.....	6,211.17
Hughes, T. J., Oil Corp., Cushing	.....	.....	6,660.02
Homeko Oil Co.,* Okemah	.....	.....	2,927.02
Hooks, James,* Tatums	.....	.....	2,086.55
Haddad, N. George,* Brooklyn, N. Y.	.....	.....	3,977.61
Hilton-Phillips, Inc., Shawnee	.....	.....	23,854.08
Herndon, Mace and Dora,* Sulphur	.....	.....	2,307.99
Harris, V. V.,* Oklahoma City	.....	.....	9,299.52
Harris, Mrs. V. V.,* Oklahoma City	.....	.....	12,109.38
Hooper, P. M.,* Lubbock, Tex.	.....	.....	3,652.68
Hoopes, Mary E.,* Lincoln, Nebr.	.....	.....	34,719.45
Hernstadt, N.,* New York City	3,311.19	.....	2,497.53
Hyde, C. B.,* Oklahoma City	.....	.....	7,546.16
Hales-Mabee-Roberts, Inc., Tulsa	43,771.29	.....	42,262.67
Heenan-Coe-Cook & Cunningham, paid by First Natl. Bank, Oklahoma City	.....	.....	3,002.30
I			
Indian Territory Illuminating Co., Bartlesville	2,584,077.89	.....	2,317,795.54
Indian Territory Illuminating Co., Bartlesville	.....	C.H.7,942,223	37,462.65
Indian Territory Illuminating Co., Bartlesville	.....	1,310,407	108,301.53
Indian Territory Illuminating Co.,* Bartlesville	49,487.28	.....	47,668.60
Indian Territory Illuminating Co.,* Bartlesville	.....	Gas	803.61
Indian Territory Illuminating Co.,* Bartlesville	.....	C.H.	3,346.09
Indian Territory Illuminating Co., Bartlesville (suspense)	.....	.....	6,447.36
Indian Royalty Co., Oklahoma City	13,427.19	.....	12,877.67
Indian Royalty Co.,* Oklahoma City	13,453.36	.....	12,052.38
Indiana Oil & Gas Co., Tulsa	22,345.50	.....	18,824.18
Indiana Oil & Gas Co., Tulsa	.....	15,528	1,633.27
Iron Mountain Oil Co., Tulsa	8,481.98	29,069	8,863.18
Investors Royalty, Inc.,* Tulsa	36 759.67	.....	33,689.56
Investors Royalty, Inc.,* Tulsa	.....	Gas	1,632.62
Ingram, H. L.,* Shawnee	.....	.....	2,401.93
Ingram Royalty Co.,* Shawnee	.....	.....	3,178.89
Ingram, J. A.,* Shawnee	.....	.....	3,939.59
J			
Jarvis-Zollinger and Andrews,* Shawnee	.....	.....	3,225.15
Jones, E. W. & F. D., Drilling Co., Oklahoma City	.....	.....	8,384.96
Johnson, D. G.,* Oklahoma City	.....	.....	3,023.55
Johnson Oil Refining Co., Chicago, Ill.	21,891.81	.....	15,394.68
Johnson Oil Refining Co., Chicago, Ill.	.....	Gas	2,216.18
Jones, Robert L.,* Bristow	6,689.24	.....	6,312.87
Jones, Robert L.,* Bristow	.....	23,3?0	1,550.72
Jones, W. M.,* Oklahoma City	.....	.....	4,?82.89
Jones, R. C., & Co., Inc., Cushing	.....	.....	5,465.52
Jameson, Guy C., and C. W. Byron,* Tyler, Tex.	.....	.....	2,287.58
Jameson, John B.,* Concord, N. H.	4,426.46	.....	4,208.52
Jennings, Randolph P.,* Beverly Hills, Calif.	.....	.....	2,014.52
Jackson, L. B., Sapulpa	.....	.....	5,953.94
Jackson, Wise and Bovaird, Sapulpa	1,913.76	.....	1,169.22
Jackson, L. B.,* Sapulpa	.....	.....	1,558.00
Jackson and Wise, Sapulpa	4,260.23	.....	4,280.01
Jackson, Wise and Markham, Sapulpa	.....	.....	1,218.47
Jackson, L. B., Sapulpa	1,530.67	.....	1,327.50
Jackson, L. B., Sapulpa	5,286.37	.....	4,024.33
Jackson, Davis A.,* Wewoka	.....	.....	2,164.15
Jones, J. Edward, paid by American Natl. Assoc., trustee, New York City	.....	.....	2,737.83
K			
Kay & Kiowa Oil Co., Tulsa	3,667.58	.....	3,251.13
Kay & Kiowa Oil Co., Tulsa	.....	Gas	455.85
Kay County Gas Co., Ponca City	.....	559,354	55,948.48
Kreola-Colcord and Commerce, Ardmore	9,141.54	.....	6,?89.47
Kreola Oil Co., Ardmore	.....	.....	2,500.06

(Continued on next page)

Bronzo's best!

High-grade Manila fiber chosen particularly for its strength and durability! Careful, skilful spinning — with 107 years' experience behind it. That's why Plymouth Bull Ropes are first in quality and first in favor among oil men.

And at no extra cost you can have Plymouth Bull Rope with the exclusive "Bronzo" lubricating treatment that preserves the rope, makes it more flexible and cuts down frictional wear.

Considered from all angles —Plymouth "Bronzo" Manila Bull Rope offers the greatest value that your money can buy.

Sold at all branches of the Oil Well Supply Company along with Plymouth Manila Drilling Lines, Crackers, Spinning Lines and Cat Lines.

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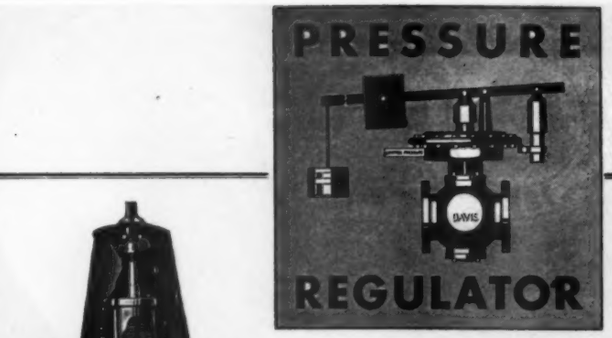
North Plymouth Mass.

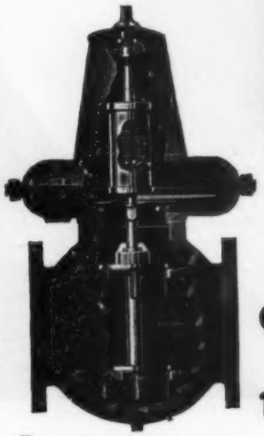
OIL WELL SUPPLY CO.
Distributors
Stores in All Oil Fields

PLYMOUTH

"Bronzo" Manila Bull Rope

"the rope you can trust"





The Davis Supersensitive Gas Relief Valve

Specially designed for the purpose

THE Davis Supersensitive Gas Relief Valve was specially designed for vapor gathering systems requiring sensitive automatic relief valves. It allows tank vapors to pass out into the compressor suction line, and prevents a vacuum from being created in the tank.

This valve is truly supersensitive. It functions on a fraction of an inch of water pressure. The spring tension of the balanced assembly is adjustable so that the relief pressure may be set as desired. An internal dash pot steadies the action and insures accurate operation. Operating parts are protected from the elements by a metal hood.

Details of this and other Davis automatic valve specialties for the oil field are contained in Catalog 11, which will be sent on request.

Davis Regulator Company
2543 S. Washtenaw Avenue
CHICAGO, ILLINOIS

Westcott & Greis, Inc.
Sales Engineers
TULSA LOS ANGELES DALLAS

Automatic valve makers for over fifty years

DAVIS VALVE SPECIALTIES

OGJ 5-28 Gray

OKLAHOMA GROSS PRODUCTION, FIRST QUARTER, 1931

Name and address—	Barrels	M. ft. gas	Amount
Kingwood Oil Co., Okmulgee	21,036.06	.....	19,249.53
Kingwood Oil Co., Okmulgee	.....	11,270	741.23
Keener Oil & Gas Co., Tulsa	28,514.96	.....	21,381.42
Keener Oil & Gas Co., Tulsa	.....	Gas	39.04
Kewanee Oil & Gas Co., Titusville, Pa.	139,377.01	849,205	130,932.41
Kedburg Oil Co., Oklahoma City	10,366.65	.....	9,444.22
Ketch, F. L., trustee for Wirt Franklin, Ardmore	21,367.46	.....	19,466.18
Ketch, Frank L., trustee for Wirt Franklin, Oklahoma City	21,367.46	.....	19,466.18
Kay Oil Co., Blackwell	11,301.43	.....	10,897.36
Klein, Nettie,* New York City	.....	.....	2,874.65
Kimble, C. C. and Sallie,* Beggs	.....	.....	2,302.05
Kanner, Mack,* New York City	.....	.....	2,075.78
Knox, Charles E., Enid	11,092.75	8,769	9,566.29
Knotts, Sarah J.,* Stillwater	3,090.00	2,261	3,016.16
Knox, R. B.,* Oklahoma City	.....	.....	2,080.39
Kerr, Robert S., Oklahoma City	.....	.....	2,693.67
Kershaw, L. R., Muskogee	.....	.....	2,385.80
King, Helen Walker,* Orange, Calif.	.....	.....	6,154.33
King, Helen Walker, guardian,* Orange, Calif.	.....	.....	1,424.67
L			
Louisiana Oil & Refining Corp., Shreveport, La.	50,236.50	.....	33,156.76
Louisiana Oil & Refining Corp., Shreveport, La.	.....	25,165	726.01
Lima Oil & Gas, Bartlesville	15,397.64	.....	14,437.11
Lima Oil & Gas, Bartlesville	.....	Gas	6,567.19
Lawson Petroleum Co.,* Tulsa	4,482.88	.....	4,025.71
Laurel Oil & Gas, Philadelphia, Pa.	44,005.39	.....	38,654.50
Laurel Oil & Gas, Philadelphia, Pa.	.....	172,901	1,893.42
Lindy Oil Co., Tulsa	.....	57,846	5,242.62
Link Oil Co., Tulsa	20,783.87	.....	17,825.33
Link Oil Co., Tulsa	.....	8,646	130.07
Little Nick Oil Co., Chickasha	.....	.....	20,264.78
Laselle, B. A. and T. E., Ada	.....	.....	25,368.83
LeFlore County Gas & Electric Co., Poteau	.....	.....	5,996.79
Lack, B. D., Co.,* Oklahoma City	.....	.....	6,701.23
Lack, B. D.,* Oklahoma City	.....	.....	3,896.47
Lack, Matyse B.,* Oklahoma City	.....	.....	3,276.79
Lybrand, W. A.,* Oklahoma City	.....	.....	3,236.13
M			
McRoberts Royalty Co.,* Tulsa	.....	.....	3,135.65
McClure, Carrie L.,* McAlester	.....	.....	2,389.13
McClure, Mary B.,* McAlester	.....	.....	2,389.13
McClure, Mary B., year 1930), McAlester	.....	.....	24,648.67
McClure, Carrie L.,* (year 1930), McAlester	.....	.....	24,648.67
McCroskey, Edgar L., and Carrie F.,* Maysville	.....	.....	4,925.66
McDonald, A. G., trustee, Oklahoma City	.....	.....	26,051.57
McGee, R. L.,* Tuttle	.....	.....	3,744.92
McKee, S. H.,* Tonkawa	.....	.....	4,188.12
McDaniel, W. T.,* Blackwell	.....	.....	2,458.32
McBride, W. C.,* St. Louis, Mo.	.....	.....	15,720.80
Magnolia Petroleum Co., Dallas, Tex.	2,437,440.94	.....	1,926,902.29
Magnolia Petroleum Co., Dallas, Tex.	.....	Gas	139,245.28
Magnolia Petroleum Co.,* Dallas, Tex.	20,176.45	.....	18,968.07
Magnolia Petroleum Co.,* Dallas, Tex.	.....	Gas	989.91
Magnolia Petroleum Co., Dallas, Tex. (suspense)	8,473.31	.....	6,972.58
Magnolia Petroleum Co., Dallas, Tex. (paid under protest)	5,115.37	.....	4,675.95
Magnolia Petroleum Co., Dallas, Tex. (paid under protest)	1,715.93	.....	1,326.13
Magnolia Petroleum Co.,* Dallas, Tex. (paid under protest)	3,503.97	6,474	3,895.78
Magnolia Petroleum Co., Dallas, Tex. (paid under protest)	2,901.61	4,667	2,872.90
Magnolia Petroleum Co., Dallas, Tex. (paid under protest)	35,807.55	.....	32,731.63
Magnolia Petroleum Co., Dallas, Tex. (paid under protest)	.....	54,311	3,606.29
Mid-Continent Petroleum Corp., Tulsa	1,317,994.83	.....	1,157,985.97
Mid-Continent Petroleum Corp., Tulsa	.....	Gas	34,581.61
Mid-Continent Petroleum Corp.,* Tulsa	.....	.....	3,785.33
Minnehoma Oil & Gas Co., Tulsa	153,165.07	.....	133,708.50
Minnehoma Oil & Gas Co., Tulsa	.....	503,353	11,500.49
Midland Royalty Corp.,* New York, N. Y.	.....	.....	34,952.32
Mo. Kans. Texas R. R. Co.,* St. Louis, Mo.	10,303.19	.....	9,592.01
Meridian Gas Co., Dallas, Tex.	.....	192,621	15,409.68
McMahon, C. L., Inc., and C. L. McMahon,* Tulsa	4,733.68	.....	4,283.37
McMahon, C. L., Inc., and C. L. McMahon, Tulsa	70,335.68	.....	62,913.70
McMahon, C. L., Inc., and C. L. McMahon, Tulsa	.....	Gas	3,309.96
Murphy Oil Co. of Pennsylvania, Philadelphia, Pa.	8,969.71	.....	7,102.36
Mulberry Oil Co., Cushing	.....	.....	66,199.89
M-G-R Oil Co.,* Duncan	.....	.....	7,305.95
Mammoth Royalty Corp.,* Oklahoma City	.....	.....	3,045.42
Mullendore Trust Co., Cleveland	.....	.....	17,576.95
Mullendore Trust Co., Cleveland	.....	Gas	663.60
Mullendore Trust Co.,* Cleveland	.....	.....	4,628.29
Margay Oil Corp., Tulsa	38,711.22	.....	33,146.05
Margay Oil Corp., Tulsa	.....	Gas	295.10
Midco Oil Corp., Tulsa	16,052.48	.....	14,416.79
Mudge Oil Co., Pittsburgh, Pa.	16,175.25	.....	8,595.88
Merrick, F. W., Inc., Ardmore	Oil	.....	24,879.25
Merrick, F. W., Inc., Ardmore	.....	Gas	236.90
Merrick, Ward S., Ardmore	.....	.....	3,364.36
Markham, J. H., Jr., Tulsa	15,924.98	.....	13,746.42
Mason, D. B., Tulsa	11,040.95	.....	9,904.06
Mitchell, W. E.,* Ardmore	5,636.35	.....	3,390.79
Moore, Clint, estate, Tulsa	10,229.50	.....	8,715.00
Moore, J. Read,* Wewoka	.....	.....	5,460.25
Mayes, E. L.,* Tulsa	.....	.....	6,081.82
Mathis, M. P.,* Shawnee	.....	.....	5,661.87
Musselem, Sophia S.,* Muskogee	2,455.42	.....	3,562.75
Mabee Petroleum Co., Tulsa	8,051.53	.....	3,142.15
Mabee, J. E., Production Co., Tulsa	153,439.54	.....	151,060.69
Mabee-Hales-Roberts, Inc., Tulsa	43,771.28	.....	42,262.67
Mid-Kansas Oil & Gas Co., Findlay, Ohio	600,420.46	.....	536,290.11
Mid-Kansas Oil & Gas Co., Findlay, Ohio	.....	Gas	23,943.69
N			
National Refining Co., Cleveland, Ohio	11,966.43	.....	10,702.80
National Refining Co., Cleveland, Ohio	.....	Gas	966.11
Natural Gas Producing Corp., Tulsa	.....	659,454	43,614.97
Noble-Olson Drilling Co., Tulsa	16,176.83	.....	11,452.96
Noble-Olson Drilling Co., Tulsa	801.15	.....	477.24
Norwood Oil Co., Tulsa	6,610.99	.....	5,066.13
Noble, Margaret Vivian,* Tulsa	.....	.....	7,961.50
Norvell, A. S.,* Wewoka	.....	.....	3,241.00
Norris, W. C., Tulsa	.....	.....	5,089.12
Neal, Justina,* Maysville	.....	.....	2,361.08
Neal, John A., and Beulah,* Wanette	.....	.....	3,547.89
"Nichey" Lease, by Superintendent Five Civilized Tribes	.....	.....	2,595.20
Nichlos Royalty Co.,* Chickasha	.....	.....	2,927.64
Nichlos Royalty Co., Chickasha	.....	.....	10,807.18
Noble, Eva E.,* Ardmore	.....	.....	2,230.93
O			
Oils Incorporated, Oklahoma City	56,225.77	.....	37,194.68
Ohio Fuel Supply Co.,* Columbus, Ohio	12,969.09	.....	12,698.91
Ohio Fuel Supply Co.,* Columbus, Ohio	.....	Gas	568.08
Ona Oil Co., Blackwell	.....	.....	10,151.32
Olean Petroleum Co., Bristow	7,350.86	.....	6,791.29
Olean Petroleum Co., Bristow	.....	51,193	4,563.40
Osage Gas Producing Co., Independence, Kans.	447.72	.....	344.17
Osage Gas Producing Co., Independence, Kans.	.....	133,690	12,032.10

(Continued on Next Page)

NEXT WEEK!

On next Thursday will be published the *Annual Pipe Line Number* of The Oil and Gas Journal, which is virtually a text book on pipe line practices, containing detailed maps of individual systems.

As a regular part of this issue will appear a Wall Map, 36″x48″, showing the transcontinental oil, gasoline and natural gas lines in the United States. Additional copies of this map will be available to those desiring it at $1 per copy. This is the first map ever published showing all gasoline pipe lines.

Despite the fact that additional copies are printed, we have never been able to meet the demand on us for copies of this issue. And so, if you are not a subscriber, and want to be sure of receiving it, we suggest that you enter your subscription on the coupon below and mail it to us.

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it does last longer, this Super-Cordage

AMCO ALL-WEATHER ROPE

because it's the only rope made with permanent protection to every fibre. The patented treatment is unlike any other and to our knowledge it is the only one that produces a *rotproof* rope. Since it is applied to the fibre before spinning of yarns, each fibre is certain of protection against *dry-rot*—the greatest menace to Manila Cordage in the oil country.

A recent rot test showed that 1½" diameter treated best Manila (an imitation of "AMCO") broke at 350 and 500 lbs. while "AMCO" "ALL-WEATHER" Manila, put to the same test at the same time, broke at 13,800 and 12,300 lbs. Is this not conclusive?

The next time you buy rope, whether it be bull lines, cat lines, general use rope, etc., insist on "AMCO" the original and genuine treated rope because it's guaranteed rotproof which spells *longer service*. It weighs no more than untreated rope.

The many imitations offered are an admission of the merit of "AMCO" which is setting new standards of longer service everywhere. Be sure your treated rope is "AMCO"—the dark brown rope always wrapped in green burlap; a green rope yarn marker is now being added on the outside of one strand to protect you against substitutes.

St. Louis Cordage Mills

Eleventh & Soulard Sts. St. Louis, Mo.

Branch of

AMERICAN MANUFACTURING COMPANY
Brooklyn, N. Y.

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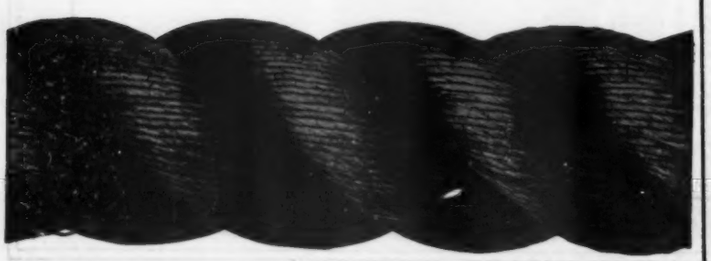
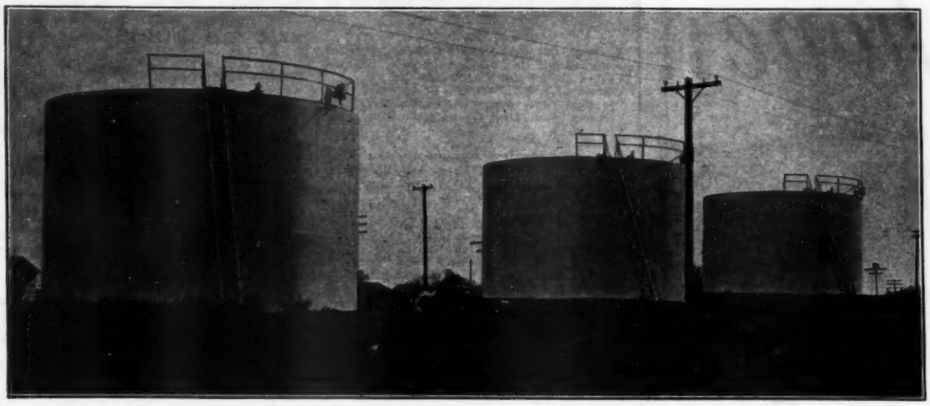


OKLAHOMA GROSS PRODUCTION, FIRST QUARTER, 1931

Name and address—	Barrels	M. ft. gas	Amount
Rogers, B. H.,* Oklahoma City	.....	.....	10,754.17
Rogers, B. H., Oklahoma City	.....	.....	1,647.78
Rogers, W. G.,* Oklahoma City	.....	.....	1,069.24
S			
Shell Petroleum Corp., St. Louis, Mo.	678,473.19	.....	598,682.18
Shell Petroleum Corp., St. Louis, Mo.	.....	2,218,066	36,996.63
Shaffer, C. B., Chicago, Ill.	11,289.32	.....	8,352.67
Shaffer, J. C., Inc., Oklahoma City	.....	.....	12,123.32
Silurian Oil Co., St. Louis, Mo.	93,660.18	.....	66,362.77
Silurian Oil Co., St. Louis, Mo.	.....	76,494	3,485.84
S. W. Production Co., Bristow	.....	137,345	10,985.59
Seay, W. D., and Clyde,* Oscar	.....	.....	6,377.14
Selby Oil & Gas, Tulsa	20,523.80	16,880	15,728.67
Selby Oil & Gas,* Tulsa	.....	.....	2,714.66
Selby, J. L., Muskogee	6,508.42	.....	5,482.06
Southland Royalty Co.,* Ponca City	25,054.30	.....	23,681.75
Southland Royalty Co., Ponca City	.....	Gas	2,738.20
Stanolind Oil & Gas Co., Tulsa	426,463.88	330,285	405,729.94
Stanlond Oil & Gas Co., Tulsa (suspense)	.....	.....	30,695.00
Superior Oil Corp., Tulsa	111,190.91	.....	94,250.83
Superior Oil Corp., Tulsa	.....	258,276	9,236.52
Skelly Oil Co., Tulsa	670,650.64	.....	538,275.78
Skelly Oil Co., Tulsa	.....	Gas	22,494.63
Skelly Oil Co., Tulsa, for E. F. Cunningham*	2,788.11	.....	2,710.94
Skelly Oil Co.,* Tulsa	8,761.90	.....	7,960.51
Skelly Oil Co., Tulsa, for L. E. Patterson*	8,515.18	.....	7,570.76
Sunray Oil Co., Tulsa	365,969.20	.....	236,807.32
Sunray Oil Co., Tulsa	.....	Gas	1,630.61
Sunray Oil Co., Tulsa	9,218.84	.....	7,463.19
Sunray Oil Co., Tulsa	.....	Gas	392.74
Sands Petroleum Corp., Tulsa	7,275.34	.....	5,740.24
Sands Petroleum Corp., Tulsa	.....	Gas	1,088.39
Shasta Oil Co., Wichita Falls, Tex.	54,114.81	.....	39,028.90
Sinclair Oil & Gas Co., Tulsa	2,356,080.85	.....	2,071,450.08
Sinclair Oil & Gas Co., Tulsa	.....	Gas	67,739.29
Sinclair Oil & Gas Co., Tulsa (suspense)	.....	.....	183,779.36
Sinclair, H. F.,* New York City	.....	.....	4,044.62
Southern Oil Corp., Winfield, Kans.	7,212.09	.....	6,058.59
Simpson-Fell Oil Co., Ardmore	10,400.56	.....	8,582.73
Simpson-Fell Oil Co., Ardmore	3,194.36	.....	2,096.17
Simpson-Fell Oil Co., Ardmore	.....	Gas	71.54
Smith, Will H., Ardmore	.....	.....	30,540.37
Smith, Elisabeth,* Oklahoma City	4,647.30	.....	4,157.10
Smith, N. Bert,* Oklahoma City	.....	.....	3,092.64
Smith, N. Bert, Royalty Trust,* Oklahoma City	.....	.....	30,134.55
Simms Oil Co., Dallas, Tex.	.....	57,702	1,461.23
Simms Oil Co., Dallas, Tex.	43,661.27	.....	39,694.36
Seminole Royalty Co.,* Oklahoma City	4,101.09	.....	4,705.14
Sheridan Oil Co., Tulsa	7,457.25	.....	5,748.86
Sheridan Oil Co., Tulsa	.....	Gas	1,312.11
Shoreline Oil & Gas, Tulsa	11,701.17	.....	9,371.96
Shoreline Oil & Gas, Tulsa	.....	Gas	612.10
Standard Royalties of Canada, Inc., Toronto, Canada	.....	.....	43,556.39
Sturm Drilling Co., Ardmore	6,987.85	721	5,721.08
Slab Oil Co., Ardmore	7,145.38	.....	7,319.91
Stahl, E. S., and Stahl Petroleum Corp., Tulsa	.....	.....	16,346.97
Smith, G. J., Tulsa	.....	.....	29,126.12
S.W. Gas Utilities Corp. of Oklahoma, Ada	.....	.....	5,019.02
Spigner, E. R.,* Tatums	.....	.....	6,182.12
Southeast Improvement Co.,* Oklahoma City	2,676.00	.....	2,622.95
Sellers, R. A., and D. C. Sellers,* Shamrock	.....	.....	2,109.39
Stekoll, Harry, Tulsa	21,032.99	.....	20,253.87
Snowden & McSweeney Co., New York, N. Y.	.....	.....	22,401.33
Sudik, Vincent,* Oklahoma City	.....	.....	3,815.88
Sterling Trust Corp., receivers, Toronto, Canada	.....	.....	3,678.03
Seay, Delbert,* Waurika	.....	.....	2,010.66
Snedden, George W., Tulsa	32,239.07	.....	31,642.72
Shuffiin, M. B., Coffeyville, Kans.	7,877.31	.....	6,382.33
Seay, O. W., estate,* Ryan	.....	.....	3,259.00
Steen, O. D., dec., Oklahoma City	.....	.....	2,625.11
Schmidt, H. E.,* Columbus, Ohio	.....	.....	2,264.84
Shimp, Ira C.,* Blackwell	.....	.....	2,320.71
St. L. & S. F. Ry. Co.,* St. Louis, Mo.	.....	.....	7,763.05
Sadler, Lottie H.,* Oklahoma City	.....	.....	2,645.51
Sadler, J. Leroy,* Oklahoma City	.....	.....	1,653.43
Schermerhorn-Young Co., Tulsa	.....	.....	988.71
Schermerhorn Oil Co., Tulsa	2,418.25	65,895	6,559.00
Schermerhorn, J. B., Inc.,* Minneapolis, Minn.	3,203.07	.....	2,588.15
Schermerhorn, J. B., Inc., Minneapolis, Minn.	42,242.56	.....	32,374.12
Schermerhorn-Ardmore Co., Tulsa	58,294.28	36,942	42,863.23
Slick, Tom, Properties, Inc., Oklahoma City	92,734.64	.....	84,393.28
Slick, Tom, Properties, Inc.,* Oklahoma City	12,940.50	.....	11,811.97
Slick, Tom, Properties, Inc.,* Oklahoma City	.....	Gas	275.38
Slick, estate of Thomas B., deceased, Oklahoma City	76,706.33	.....	78,906.69
Slick, estate of Thomas B., deceased, Oklahoma City	.....	951,310	5,280.03
Slick-Urschel, Inc., Oklahoma City	1,063,028.57	.....	953,059.32
Slick-Urschel, Inc., Oklahoma City	.....	2,332,155	14,090.90
Slick-Urschel, Inc.,* Oklahoma City	5,565.90	.....	4,969.05
Slick-Urschel, Inc.,* Oklahoma City	.....	Gas	168.24
Slick Pipe Line Corp.,* Oklahoma City (suspense)	14,699.60	.....	13,153.51
Slick Pipe Line Corp.,* Oklahoma City (suspense)	38,158.02	.....	35,018.42
Slick Pipe Line Corp.,* Oklahoma City (suspense)	918.64	.....	910.18
Slick-Urschel, Inc., Oklahoma City	23,242.14	.....	22,624.40
Slick-Urschel, Inc., Oklahoma City	.....	Gas	117.22
Slick Oil Co. for Western Paving Co., Oklahoma City	11,956.23	.....	19,654.95
Slick, T. B., estate, for William H. Atkinson, Oklahoma City	.....	.....	4,070.27
Slick, T. B., estate, for H. W. Priest, Oklahoma City	.....	.....	1,432.78
Slick, T. B., estate, for Ollie Black, Oklahoma City	.....	.....	1,432.78
Slick, T. B., estate, for Frank Russell, Oklahoma City	.....	.....	2,103.37
Slick, T. B., estate, for J. M. Russell, Oklahoma City	.....	.....	2,103.37
T			
The Texas Company, prod. dept., Tulsa	852,106.24	.....	723,605.65
The Texas Company, prod. dept., Tulsa	.....	Gas	52,456.34
The Texas Company, prod. dept.,* Tulsa	5,105.79	.....	4,531.65
The Texas Company, prod. dept.,* Tulsa	.....	Gas	326.65
Turman Oil Co., Tulsa	114,899.58	.....	99,751.24
Turman Oil Co., Tulsa	.....	176,889	3,981.70
Tidal Oil Co., Tulsa	391,126.68	.....	309,914.78
Tidal Oil Co., Tulsa	.....	Gas	11,281.67
Tidal Oil Co.,* Tulsa	7,196.29	.....	6,064.07
Tidal Oil Co.,* Tulsa	.....	Gas	454.00
Texas Pacific Coal & Oil Co., Thurber, Tex.	38,973.17	Gas	23,168.08
Treveyn Oil Co., Duncan	.....	.....	25,797.02
Twin States Oil Co., Tulsa	350,869.79	.....	309,610.17
Twin States Oil Co., Tulsa	.....	442,285	12,356.00
Twin States Oil Co.,* Tulsa	2,638.14	Gas	2,928.14
Traders Compress Co., Fort Worth, Tex.	.....	.....	46,834.87
Theimer, B. J.,* Oklahoma City	.....	.....	13,400.40
Thiocco Oil Co., Tulsa	9,051.20	.....	8,979.02
Tri-State Royalty Co.,* Tulsa	.....	.....	5,539.33
Tull, Vida M.,* Oklahoma City	5,409.71	.....	4,994.68
Tull, Vida M.,* Oklahoma City	.....	Gas	576.17
Turner, H. E., Oklahoma City	12,159.21	.....	11,717.12
Trosper Park Royalty Owners, by First Natl. Bank, Oklahoma City	.....	.....	7,963.47
Trosper, Clarence E.,* Oklahoma City	12,299.43	.....	11,520.81
Trosper, Clarence E.,* Oklahoma City	.....	7,051	76.24
Trosper, L. M.,* Oklahoma City	2,655.78	.....	2,574.69

(Continued on next page)

PITTSBURGH DES MOINES



Three 5,000 Barrel Oil Tanks

erected in an Oklahoma oil refinery during 1930. Each tank has a welded cone roof and is equipped with a sturdy, compact and modern "Pittsburgh-Des Moines" steel stairway and railing. Forty one tanks of various capacities were erected on this one contract.

Other "Pittsburgh-Des Moines" products for the oil and gas industry are:

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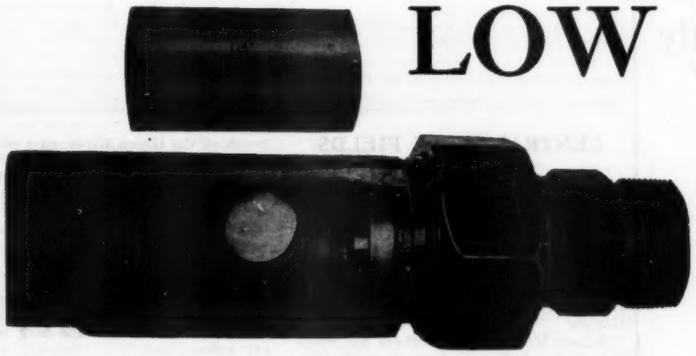
Steel Pipe Lines,
Refinery Equipment,
Gas Holders and Tanks,
Gasoline and Fuel Oil Storage Tanks,
Booster Stations and Pumping Plants.

[Further information on our standard oil storage tanks will be sent to you upon request. No obligation.]

Pittsburgh-Des Moines Steel Company

3486 Neville Island, Pittsburgh, Pa. — 1291 Praetorian Bldg., Dallas, Texas — 987 Tuttle St., Des Moines, Ia.

New York San Francisco Seattle Chicago Atlanta



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MacCLATCHIE FLOW NIPPLE
The Choice Of
Many Leading Operators

Beans Are Interchangeable On Any Size Nipples

Mr. W. C. Whaley
(General Superintendent of The Barnsdall Oil Co. of California) Says:

The MacClatchie Flow Nipple Demonstrated the Following Advantages Over Other Makes of Flow Devices in Recent Tests Conducted by His Company:

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—Easy and Quick to Change.
—Made less tight emulsion and lasted longer in sand.
—When pack hardened lasted twice as long.
—Pressure Gauge gives warning of gradual wear of Bean, thereby permitting replacement before pressure drops to a harmful point.

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JM PRODUCT

packings

OKLAHOMA GROSS PRODUCTION, FIRST QUARTER, 1931

Name and address—	Barrels	M. ft. gas	Amount
Trosper, Elizabeth Jane,* Oklahoma City	6,131.45	Gas	6,297.68
Thompson, Roy M.,* Tulsa	3,405.49	.....	2,948.77
Thompson, William M.,* Tulsa	3,419.14	.....	2,961.23
Tomlin, R. E.,* Ada	.....	.....	8,644.91
Trail, C. R.,* Sapulpa	.....	.....	3,647.01
Tanner, H. C., and N. M. Tanner,* Oklahoma City	8,674.69	.....	8,163.42
U			
U. S. Royalties Corp.* New York, N. Y.	.....	.....	3,190.00
Utilities Production Corp., Tulsa	.....	825,099	37,642.15
V			
Vacuum Oil Co., Houston, Tex.	81,747.45	.....	80,876.41
Vacuum Oil Co., Houston, Tex.	.....	260,085	3,145.52
Valley Osage Oil Co., Tulsa	13,666.14	.....	10,905.44
Venmex Oil Co., Wichita Falls, Tex.	22,446.96	.....	17,118.20
Vierson Oil & Gas,* Okmulgee	5,286.65	.....	5,593.95
Vierson, Sam K.,* Okmulgee	1,878.53	Gas	2,023.47
Vierson, A. A.,* Okmulgee	16,096.33	.....	16,619.44
Vance, Mary E., Tulsa	1,741.43	.....	2,034.48
Varnum, Eliza P.,* Shawnee	3,999.46	.....	3,468.70
Varnum, W. F., and Eliza P.,* Shawnee	4,207.16	.....	3,334.36
Voorhees, Leon G.,* Oklahoma City	.....	.....	4,721.63
Vencel, Alex.,* Oklahoma City	.....	.....	4,740.97
W			
Wilcox, H. F., Oil & Gas, Tulsa	174,690.52	.....	155,465.89
Wilcox, H. F., Oil & Gas, Tulsa	.....	Gas	7,046.52
Wilcox, H. F., Oil & Gas,* Tulsa (suspense)	.....	.....	1,458.40
Wilcox, H. F., Oil & Gas, Tulsa (production suspense)	18,547.77	.....	9,767.27
Wilcox, H. F., Oil & Gas,* Tulsa	1,922.58	.....	1,834.50
Wentz, L. H., Oil Division, Ponca City	113,304.48	Gas	108,627.58
Wentz Oil Corp., Ponca City	651.77	.....	589.65
Wentz, L. H.,* Ponca City	3,298.13	.....	2,643.15
Westheimer and Daube, Ardmore	84,947.96	.....	67,279.95
Westheimer and Daube, Ardmore	.....	Gas	1,400.69
Westheimer and Daube,* Ardmore	15,683.15	.....	12,980.09
Westheimer and Daube,* Ardmore	.....	Gas	508.73
Winona Oil Co. of Delaware, Tulsa	22,405.52	.....	18,097.73
Winona Oil Co. of Delaware, Tulsa	.....	Gas	6,073.97
Westland Oil Corp., Tulsa	13,875.87	.....	12,643.23
Westland Oil Corp., Tulsa	.....	6,979	120.88
Western Paving Co., by Slick estate, Oklahoma City	22,956.23	.....	19,654.95
Walker, E. A., Oklahoma City	.....	.....	7,669.66
Western Oklahoma Gas Co., Gans	.....	99,561	9,956.10
Wolverine Petroleum Corp., St. Louis, Mo.	150,388.31	.....	116,654.46
Wolverine Petroleum Corp., St. Louis, Mo.	.....	Gas	8,707.65
Warner-Caldwell Oil Co., Titusville, Pa.	27,249.35	.....	21,263.57
Warner-Caldwell Oil Co., Titusville, Pa.	.....	Gas	552.20
Wrightsmith Oil Co., Ardmore	20,138.34	.....	18,014.11
Wiser Oil Co., Sistersville, W. Va.	44,695.32	.....	34,321.35
Washington Royalties Co.,* Tulsa	6,329.75	Gas	5,846.53
Wilson, Irvin,* Wewoka	.....	.....	2,254.33
Williams, C. D.,* Ardmore	.....	.....	1,821.97
Whitehill, Howard J., Tulsa	17,539.63	.....	14,374.84
Whitehill Oil Corp.,* Tulsa	1,829.39	.....	1,587.32
Whitehill, Howard J., and H. C. Weible, Tulsa	11,600.30	.....	9,407.02
Whitehill, Howard J., for others, Tulsa	.....	.....	7,219.47
Wood Oil Co., Tulsa	.....	.....	8,126.00
Wood, Maud,* Seminole	.....	.....	4,754.96
Wood, Roy,* Oklahoma City	.....	.....	6,484.58
Wilson, Benton,* Greenfield, Mo.	.....	.....	2,627.78
Watkins, F. E., estate,* Waurika	4,350.70	.....	2,845.31
Westoak Gasoline Co., Sayre	5,169.45	.....	6,769.17
Winkler and McQueen, Duncan	4,978.49	.....	4,335.56
Winkler and McQueen, Duncan	Oil	.....	1,236.05
Wright, J. H., estate, Sapulpa	15,473.51	.....	13,265.09
Wright, J. H., estate, Sapulpa	.....	Gas	608.62
Willmott, John W., San Diego, Calif.	.....	.....	9,900.87
Y			
York Petroleum Corp.,* Muskogee	3,887.36	.....	3,740.96
York Petroleum Corp.,* Muskogee	.....	Gas	339.18
Young, L. W.,* Oklahoma City	.....	.....	2,479.03
Z			
Zimmerman, L. W., Chicago, Ill.	16,753.15	.....	10,459.16

CENTRAL WEST FIELDS

(Continued from Page 50)

southwestern part of the State, and the Peoples Petroleum Co. is drilling No. 1 William Riggs farm, near Darmstadt, same county.

San Juan Coal & Oil Co. abandoned No. 1 on the Arthur Hanrahan farm, Section 36, Chester Township, Porter County.

James McMahan and others are drilling on the Nellie Graham farm, 5 miles west of Cicero, and near the old Edwards well, in the NE SE, Section 6, Jackson Township, Hamilton County.

Last report from the test on the William McKensen farm, Section 19, Hendricks Township, Shelby County, by the W-B Oil Co., is that it was near the bottom of the Trenton limestone formation.

Old Dominion Corp. is drilling on the Mager & Fisher farm, SW, Section 4, Washington Township, Greene County.

KENTUCKY

The outstanding feature in the Kentucky fields was the bringing in of a rather nice gas well on the Walker Malone farm, approximately 6 miles southeast of Munfordville, in Hart County, at a depth of 428 feet. This well is estimated around 2,500,000 feet, and is just off the Jackson Highway. The owners contemplate drilling deeper in hope of finding oil below the gas. The well is really a wildcat and means additional gas in the vicinity and not far from the Missouri-Kansas Pipe Line Co.'s line that runs into Munfordville from the south.

To the southwest of Munfordville, in Hart County, and in Logsdon Valley, north of the Green River, east of Forestville and near the Forest Hill Church, Clarence Bundy and others' No. 3 on the Eli Bradley farm, is another good well for the new pool, being estimated around 350 bbls. initial and while not as large as the initial well on the farm, indicates that it is a rich spot to develop.

In the Owensboro Field of Daviess County, E. L. Newton and others' Nos. 1 and 3 on the M. D. Wells farm, in the Red Hill district are both reported dry holes.

The gas producing area is working toward the Mammoth Cave and Cave City, the latter in Barren County.

Total runs from wells served by the Illinois Pipe Line Co. in western Kentucky during the month of April, 1931, follow: 84,799.62 bbls.

The Cumberland Pipe Line Co., Inc., runs from the eastern Kentucky fields for the month of April totaled 166,133.49 bbls.

METHODS OF OBTAINING BALANCED BANDWHEEL

(Continued from Page 50)

necessary to set a counterweight in the required direction. It has been our experience that in the great majority of cases no counterweight is necessary as the trouble can be corrected by shifting or swinging wells.

The most desirable counterweight, if one is needed, is a constant pull. This cannot be obtained from the common weight box filled with junk as these vary as much as 300 per cent from minimum to maximum pull. We have used a shop-

made counterweight built on the order of the "V" of a common Oklahoma pump jack. The horizontal member is 8¼-inch pipe weighted with a block of concrete which can be moved back and forth to vary the load. The vertical member is two 6⅝-inch pipes welded to the 8¼-inch, with rocker type bearing for the cable shackle line. This rocker principle was borrowed from the Goble constant leverage pump jack. A counterweight of this type does not give a constant pull, but it approaches a constant much nearer than the common junk box.

Although we have not kept close check on the saving in repairs affected, we do have a few examples of tangible results. In one power, run by a 40 horsepower electric motor, it was necessary for one man to throw the switch while another pulled on the belt in order to get over the peak load. After counterweight was installed only one man was necessary to start the power, as it picked up the load smoothly. A wattmeter on this motor showed that power consumed after balancing load was practically the same as before. In another power, installed on a newly developed property, the eccentric ring burned out within the first month of service. After balance was effected by placing two wells on swings, we have experienced no more trouble.

The cost of determining what procedure is necessary to balance the load is small, requiring only the labor of two men about three minutes per well in the field and the labor of one man in the office for approximately four to six hours per power. Recording dynamometers that will last indefinitely can be bought for around $50.

The cost of instituting the necessary corrective measures depends, of course, on the method determined upon. Labor and material for placing one well on a swing will be about $75, and our type counterweight will cost about the same. If shifting wells from one eccentric to the other will do the work, the cost is practically nothing.

ROCKY MOUNTAIN AREA

(Continued from Page 36)

Standard of Colorado turned to the Vogel-Raddatz interests a half interest in 480 acres in Section 16-4n-69, and the two will drill No. 2 State, in the center of the northwest quarter on a 50-50 basis, with Vogel-Raddatz in charge of drilling. William Mosher has a rig up in the SE NE, Section 20-4n-69, on the Hogsitt and Hall tract of 10 acres, and Perl Mosher is rigging up for his No. 1 Meade, SE NW NE, Section 20. Loveland interests are reported financing this operation. The Standard of Colorado's No. 1 Hertha, NW cor., Section 21-4-69, which has been producing from the Muddy sand at a total depth of 3,792 feet, is being cleaned out to be put on the pump and is swabbing 125 bbls. daily. A. Beardsley, of Great Falls, Mont., a well known operator in the Montana fields, has come to Denver to become manager of operations for the Standard of Colorado.

Moffat County

The Mountain Fuel Supply Co.'s No. 2 State, SW SE NE, Tract 37-12n-100, Hiawatha Dome, was completed at a total depth of 2,287 feet as a gas well. It gauged 17,500,000 feet with a pressure of 925 pounds the first 24 hours. It will be hooked in with the natural gas system into Utah.

Park County

The South Park Oil Co.'s No. 1 Milligan, NE cor. SE, Section 13-8s-76, Jefferson district, is bottomed at 2,015 feet and cleaning out to lower the 8¼-inch to shut off cavey ground. The South Park Oil & Gas Co.'s No. 1 Esche, SE cor. NW, Section 5-9s-76, Muleshoe Dome, is drilling at 2,225 feet in limey black shale. At this depth it has a small show of oil, the best so far encountered, and a slight increase in gas. The hole is open below 507 feet and no water has been encountered.

Montrose County

The Uncompahgre Oil & Gas Co.'s No. 2 Vandemark, SW cor., Section 27-50n-10w, near Olathe, is drilling at 910 feet.

Montezuma County

Fred C. Haller's No. 2 Carr, C NE SW, Section 33-36n-14, Point Lookout Dome, lost the hole at 240 feet and skidded rig 1,500 feet to the west and is drilling at 270 feet in light gray shale in No. 2-A Carr, NW cor. SW, Section 33-36-14.

Archuleta County

The Standard Oil Co. of Colorado's No. 1 Brooks, NW cor. NE, Section 2-32-2e, Price structure, is spudding with machine at 50 feet.

WYOMING

Natrona County

The Midwest Refining Co.'s No. 11 Middy, C NE NE, Section 23-35-79, Midway Dome, a joint operation with the Salt Creek Producers Association, the Mountain Producers Corp., and the Midway-Geary Syndicate, was drilled to a total depth of 6,685 feet and is being plugged back to 6,505 feet to test a sand that had a show of oil. It will then be plugged back to the Muddy sand at 5,967-83 feet, which had 10 feet of saturated sand at the top. The test went through all horizons, including the Frontier, Muddy, Dakota, Morrison and Sundance sands down to and into the red beds. It topped the red beds at 6,620 feet. The results in the test indicate that commercial production on the structure may be developed in the second Frontier and Muddy sands. There were 53 feet of Dakota and Lakota sand below the Muddy, consolidated except for several thin breaks, and about 400 feet of the Sundance formation. It has not yet been announced as to what will be done with the Geary Dome test, which was shut down after failing to find production in the second Frontier until the Midway test was deepened.

The Cuyler Oil Co.'s No. 1 Heery, SE, Section 23-36-85, Powder River, has been delayed for several weeks with trouble in shutting off water from the first Frontier. It is bottomed at 1,250 feet and has cemented several times between the first and second sands.

The Wyalta Oil Co. has been cleaning out and repairing its three wells on the Spindletop Dome, southwest of Casper in Sections 32-30-81 and 5-29-81. The purpose of this work was to stop leaking of water into the wells. They have been shut down since completion two years ago. No. 1, after being repaired, produced at the rate of 60 bbls. a day.

Park County

The Resolute Oil Co.'s No. 1, NE SW NE, Section 17-57-101, Badger Basin, is being deepened slowly into the second Frontier sand is making about 1 foot per day, the slow progress being due to the extreme depth of the test, the hole being full of oil and its small size. At last reports it was drilling at 8,537 feet and flowing by heads about twice a day. It is in a 3½-inch hole. No test of production has as yet been made. Grebo Royalties, Inc.'s No. 1 McGrath, NE cor. SE, Section 3-47-100, Little Buffalo Basin, is drilling at 700 feet.

Big Horn County

F. T. Griffith, trustee's No. 1, SE NE SE, Section 29-56-97, Garland Dome, is drilling at 2,310 feet, and the Ohio Oil Co.'s No. 1 Smith, NE SE SE, Section 33-56-97, is drilling at 1,360 feet. The Utah Southern Oil Co.'s No. 3 Government, NE cor. SW, Section 29-56-97, is coring and drilling in lime at 3,800 feet.

Washakie County

The Ohio Oil Co.'s No. 1 Strothers, SW SE NW, Section 19-45-92, Neiber Dome, is drilling at 4,290 feet.

Converse County

The Continental Oil Co.'s No. 50 Whiteside, NW SW SW, Section 9-33-76, Big Muddy, is rigging up rotary to deepen from 3,345 feet to the Lakota sand.

Niobrara County

The Indian Petroleum Co.'s No. 1, NW NE, Section 7-35-65, Lance Creek, which is being deepened to the Sundance at 4,200 feet, is drilling at 3,884 feet in hard sand. The Phillips Petroleum Co.'s No. 1, SW SE, Section 32-34-65, Middle Creek Dome, is drilling at 450 feet with a 3-inch core bit. It had a good show of oil at 170 feet in either the basal Morrison or upper Sundance. The objective sand in the Sundance is expected at around 650 feet. It is expected that several holes will be drilled regardless of outcome in this test.

Weston County

Montana refineries are reported bidding

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BULL ROPE

$1.20 per barrel for Osage crude on contract. This is 22 cents above the price posted recently by the Arro Oil & Refining Co., of Lewistown, Mont. The mineral division of the United States Geological Survey recently established a minimum price of $1 per barrel for government royalty oil from federal leases. There were no completions reported for the week. The Wytex Oil Co.'s No. 5 Logan McCullough, SW NE NE, Section 23-46-64, is spudding, and Carl Cundy's No. 2, NE cor., Section 31-46-64, is rigging up. The Yellowstone Petroleum Co.'s No. 1, NE cor. NW, Section 23-46-64, is spudding, and Tom Don's No. 2, NW cor. SE, Section 23-46-64, is drilling at 400 feet. Clark and others' No. 1, SE NE NE, Section 15-46-64, is shut down at 1,524 feet, and Hugh Updike's No. 1, SE SW NW, Section 23-46-64, is drilling at 1,700 feet. Chadron-Osage Co.'s No. 2, NW SW, Section 31-46-63, is shut down at 100 feet.

Carbon County

The Petroleum Exploration Co. of California's No. 1, NW SE SW, Section 29-23-88, the Willows, or Buck Springs Dome, is reported abandoned at 2,596 feet with a hole full of sulphur water. This probably was in the Sundance. It had a good show of oil and gas in the top of the Frontier at 791 feet and water in the lower Frontier. The Ohio Oil Co. had an interest in the well. The Producers & Refiners Corp.'s No. 1, Section 19-20-83, Overland Dome, 30 miles west of the Rock River Field, is spudding. The surface is sand. The same company's No. 1, NE SE NE, Section 7-25-86, South Ferris, is drilling at 1,730 feet in blue gray shale. The Midwest Refining Co.'s No. 27 Union Pacific, NW SE SE, Section 11-20-81, Elk Mountain, is drilling at 2,145 feet in gray shale. The 13-inch is at 1,792 feet. This is a test to the Dakota at around 3,500 feet.

Laramie County

The Prairie Oil & Gas Co.'s No. 1 Warren, Section 22-13-68, 10 miles southwest of Cheyenne, on the Warren Cattle Co. ranch, is building rig and setting tanks.

Fremont County

The Producers & Refiners' No. 10, SE NW SW, Section 14-32-95, Big Sand Draw, cored to 5,318 feet in sand and is preparing to ream at 5,248 feet, and its No. 2, NW SE NW, Section 33-34-92, Muskrat Dome, is drilling at 5,240 feet in blue shale.

Sweetwater County

The Mountain Fuel Supply Co.'s No. 1 Cappers, SW cor. NE, Section 2-19-104, North Baxter Basin, which showed for approximately 2,000,000 feet of gas and 20 to 25 bbls. of 36 gravity oil in a sand in the upper Sundance at 3,595-3,630 feet, is drilling out cement after setting the 6⅝-inch at 3,660 feet.

Sublet County

Thomas B. Jefferson's No. 1, Section 11-28-113, Dry Piney, is drilling at 1,850 feet after shutting off a good show of gas at 1,825 feet. The objective is expected at 2,000 to 2,200 feet.

MONTANA

Glacier County

Four locations in the Cut Bank Field in Glacier County were announced this week following the closing of the deal whereby the Montana Power Co. acquired the interests of Louis B. O'Neil and associates in gas reserves in that field and also in the pipe line project from Cut Bank to Helena, Deer Dodge, Anaconda and Butte. The spacing of the wells indicate that they have been located with a view to determining the productive area of the field and the reserves that may be counted upon for the pipe line project. The discovery well, No. 1 Michaels, which came in last year proving this field, is located in the C SE SE, Section 28-36-5w. It made 15,000,000 feet of gas at 2,750-71 feet. The new locations are as follows: No. 1 State, C NW NW, Section 33-36-5w, rig up and contract let to the Craig Drilling Co.; No. 1 State, C SE NW, Section 34-36-5, rig up and contract let to Lou Crumley; No. 1 Taylor & Spikes, C SW SW, Section 35-36-5, rig up and contract let to Nadeau Brothers; and No. 1 Schneider, C NE SE, Section 32-36-5w, rig up and contract let to George Nadeau.

The Montana Utilities Co.'s No. 1 Hogland, NW cor. SW, Section 13-34-6w, which spudded with machine and shut down, is building standard rig. The B. & H. Oil Co.'s No. 1 Haines, C SE SE, Section 2-34-6w, which will make a small well, was deepened to 3,805 feet after cementing at 2,761 feet, on top of the sand, and swabbed 90 bbls. in two days. After certain repairs are made and tanks are erected, it will be given a test.

The Fulton Petroleum Co.'s No. 1 Blackfeet, SW NE NE, Section 28-36-12w, Milk River district, is drilling ahead after cementing the 16-inch at 1,600 feet.

Carbon County

The Ohio Oil Co.'s No. 1 Montana Industrial, SE SW NE, Section 1-17-21, Dry Creek, a north offset to the discovery well in the Dakota, has slowed up progress considerably due to the hard formation in which the bit is working. It is making hole at 5,294 feet and probably is in or close to the top of the Dakota formation. Same company's No. 1 Souders, C SW SE, Section 2-7-21, is drilling at 2,633 feet. The Carbon Oil & Gas Co.'s No. 1 Armstrong, SW cor. NW, Section 7-7-22, is drilling at 2,300 feet with cable tools and shortly will change over to rotary bit.

Rosebud County

The Prairie Oil & Gas Co.'s No. 1-X, Contract 3, NE SW NW, Section 26-10n-39, Porcupine Dome, is bottomed at 3,415 feet and cemented whipstock at 1,900 feet preliminary to attempting to drill by bit.

Liberty County

Northland Oil & Gas Co.'s No. 1 Yurman, C SE SW, Section 32-33-5e, Liberty Dome, is drilling at 3,605 feet in the base of the Madison lime and is estimated to be about 30 feet off the top of the Devonian. A show at 3,471 feet was soon exhausted when tested. G. G. Howard's No. 1 Schoonover, NW NW, Section 18-36-6e, is drilling at 2,100 feet and will go to the Ellis. It had 5,000,000 feet of gas per day in the Sunburst sand at 1,973 feet.

Choteau County

Coolidge & Coolidge's No. 2 Lehfelt, SW SE NE, Section 32-26-17, Sherrard Dome, joint with the Texas Pacific Coal & Oil Co., had water at a total depth of 1,360 feet and is plugging back to gas sand at 1,285 feet to complete. It is estimated at 1,500,000 feet a day.

Toole County

The Liquid Gold Oil Co.'s No. 1 Roberts, C NW NE, Section 25-36-1e, Barthelote district, is underreaming the 6¼-inch at 2,180 feet to set at 2,230 feet. Same interests' No. 1 Bucher, C SW NE, Section 25-36-1e, is digging cellar.

UTAH

The Utah Southern Oil Co.'s No. 1 Balsey, C NE NE, Section 31-23-21, Salt Valley, is drilling at 2,975 feet in shale, having penetrated the salt beds. It will test the lower Pennsylvanian and Devonian in the next 500 to 600 feet.

SOUTH DAKOTA

The Gypsy Oil Co.'s No. 1 Hunter, C NE SW, Section 28-3n-16e, Wall structure in Pennington County, is shut down after cementing back to 500 feet. At 1,000 feet an acid test showed it to be 10 degrees off the vertical. It was then deepened to 1,193 feet and another test showed it to be 13 degrees off. It was then cemented back to straighten up the hole.

IDAHO

The Grand Teton Oil Co.'s No. 1 Blevins, SW SE, Section 33-5n-44, Horseshoe Dome, Teton County, has installed rotary equipment and is cleaning out at a total depth of 3,304 feet. The well was drilled to this depth with cable tools and then shut down for the winter. It is bottomed 260 feet below the Frontier-Aspen contact. Another sand is expected within the next 225 feet. The I. L. Howells Co.'s No. 1, SW, Section 32-2n-3w, Pickle Butte district, Canyon County, is drilling at 175 feet in sandy shale in a 10-inch hole. The Idaho-Oregon Petroleum Corp.'s No. 2, NW SE, Section 33-9n-5w, town of Payette, is reported to have installed new equipment and getting ready to resume after settling litigation. This well was reported last spring to have had a gas blowout at 1,270 feet. Last fall it was reported down 1,800 feet. The Mountain States Oil & Gas Co.'s No. 2 Daniels, SW SW, Section 32-10n-4w, Payette County, is working with the 10-inch at a total depth of 1,995 feet. It has not made any new hole since it threw large quanitiets of mud, water and sand over the top a year ago when gas was encountered. Since then efforts have been made to put the hole back in shape for further operations. Breckenridge & Whitney's No. 1 Drysdale is reported to have material on ground for a well on the Crystal Dome.

Rocky Mountain Fields

Average daily production in week ending May 23:

WYOMING	
Salt Creek	25,840
Big Muddy	1,910
Byron	5
Dallas-Derby	620
Dutton Creek	70
Elk Basin	590
Ferris	30
Frannie	900
Grass Creek	3,060
Hudson	290
LaBarge	980
Lance Creek	200
Lost Soldier	4,370
Lovell	....
Oregon Basin	1,380
Osage	1,130
Rock River	1,950
Poison Spider	220
Simpson Ridge	....
South Casper	....
Teapot	20
Warm Springs	....
Total	42,495
MONTANA	
Buckley-Border	760
Cat Creek	1,020
Dry Creek	520
Kevin-Sunburst	4,420
Lake Basin	50
Pondera	1,310
Total	8,080
COLORADO	
Florence	280
Fort Collins	990
Iles	1,000
Moffat	930
Orchard	350
Rangely	20
Tow Creek	360
Total	3,930
NEW MEXICO	
Rattlesnake	1,080
Hogback	480
Table Mesa	81
Artesia	909
Cap Rock	200
Getty	304
Hobbs	36,600
Jal	1,000
Lea City	2,500
Eunice	546
Texas-Pacific area	....
Total	43,700
Total Rocky Mountain fields	98,205
Total previous week	99,516
Difference	1,311

EAST CENTRAL TEXAS

(Continued from Page 42)

its lease. It will be the eleventh company to serve the area.

Cut-Price Oil in Plenty

Much oil is being run below the Mid-Continent posted prices in the East Texas district and a "show down" is expected within a short time, probably to result in a cut by the major pipe line and purchasing companies serving the field, consequently the next two weeks will be of vital importance to the operators in the district, for conditions in the district are such that it is difficult for all the producers to get together on any one plan or method, and drastic action may have to be taken in order to smooth out the present situation.

The F. & M. Drilling Co., which completed a producer in the Gladewater area this week, will build a 6-inch line from the well to a loading rack on the T. & P. Railroad and will ship its oil by tank car.

COMPLETIONS IN EAST CENTRAL TEXAS

Rusk County

Gulf Production Co.'s No. 1 O'Quinn, top Pecan Gap 2,710 feet, base Pecan Gap 3,107 feet, sand 3,735-52 feet, initial production 192 bbls. per hour open through tubing, total depth 3,752 feet. Same company's No. 3 Birdsong, top sand 3,552 feet, initial production 80 bbls. per hour through three-fourths-inch tubing choke, total depth 3,572 feet. Same company's No. 1 Della Crim, top sand 3,624 feet, initial production 124 bbls. per hour through three-fourths-inch tubing choke, total depth 3,638 feet. Same company's No. 1 T. B. Cashen, top Pecan Gap 2,780 feet, base Pecan Gap 3,180 feet, initial production 109 bbls. per hour through three-fourths-inch tubing choke, total depth 3,794 feet. Houston Oil Co.'s No. 3 Dave Ladd, top sand 3,650 feet, initial production 76 bbls. per hour through three-fourths-inch tubing choke, total depth 3,689 feet. Gulf Production Co.'s No. 4 Birdsong, top sand 3,559 feet, initial production 113 bbls. per hour through three-fourth-inch tubing choke, total depth 3,582 feet.

East Texas Refining Co.'s No. 5 S. B. Wills, initial production 105 bbls. per hour through three-fourths-inch tubing choke, total depth 3,687 feet. Cromwell and others' No. 1 C. J. Bredberry, top sand 3,680 feet, initial production 40 bbls. per hour through twenty-seven-sixty-fourths-inch choke, total depth 3,708 feet. British-American's No. 1 Willie Ector, top sand 3,600 feet, initial production 220 bbls. in 10 minutes through crooked valve on casing, total depth 3,615 feet. Humble Oil & Refining Co.'s No. 3 J. N. Peterson, abandoned location. N. W. Hunter's No. 4 Buntyn, top sand 3,665 feet, initial production 125 bbls. per hour through three-fourths-inch tubing choke, total depth 3,695 feet. Lewis & Perkins' No. 1 Brock heirs, top sand 3,634 feet, initial production 120 bbls. per hour through three-fourths-inch tubing choke, total depth 3,650 feet. Olvey's No. 4 Crim, top sand 3,701 feet, initial production 38 bbls. in 10 minutes through 1½-inch choke, total depth 3,737 feet.

Stanolind Oil & Gas Co.'s No. 1 J. S. Powers, top sand 3,674 feet, initial production 132 bbls. per hour through three-fourths-inch tubing choke, total depth 3,678 feet. Same company's No. 1 M. R. Terrell, top sand 3,700 feet, initial production 55 bbls. per hour through eleven-sixteenths-inch tubing choke, total depth 3,713 feet. Sun Oil Co.'s No. 2 Baker, abandoned location. Sun Oil Co.'s No. 1 J. R. Beall, top sand 3,614 feet, initial production 110 bbls. per hour through three-fourths-inch tubing choke, total depth 3,625 feet. Westheimer's No. 4 Peterson, top sand 3,685 feet, initial production estimated 115 bbls. per hour through three-fourths-inch choke, total depth 3,746 feet. Cranfill & Reynolds' No. 2 Thompson, top sand 3,625 feet, initial production 93 bbls. in 15 minutes through open tubing, total depth 3,659 feet. Gulf Coast Oil Co.'s No. 2 Brightwell, top sand 3,646 feet, initial production 430 bbls. per hour through 1-inch choke, total depth 3,659 feet.

Houston-Smith's No. 1-A N. C. Bean, top sand 3,530 feet, initial production 104 bbls. per hour through 1-inch tubing choke, total depth 3,632 feet. Hunter's No. 3 Buntyn, top sand 3,684 feet, initial production estimated 115 bbls. per hour through three-fourth-inch tubing choke, total depth 3,717 feet. Magnolia Petroleum Co.'s No. 1 Birdsong, top sand 3,689 feet, initial production estimated 13,000 bbls. per day, total depth 3,693 feet. Mid-Kansas Oil & Gas Co.'s No. 1 J. R. Beall, top sand 3,648 feet, initial production 186 bbls. per hour through tubing open, total depth 3,657 feet. Republic Production Co.'s No. 2 Hindman, top sand 3,614 feet, initial production 178 bbls. per hour through various chokes, total depth 3,629 feet.

Snowden & McSweeney's No. 2 Bean, top sand 3,637 feet, initial production 73 bbls. per hour through three-fourths-inch choke, total depth 3,679 feet. Berry & Lewis' No. 1 Thompson, abandoned location. Crabtree's No. 1 Giles, top Pecan Gap 2,691 feet, base Pecan Gap 3,028 feet, sand 3,678-3,705-12 feet, initial production 50 bbls. per hour through 1-inch tubing choke, total depth 3,112 feet.

Gulf Production Co.'s No. 1 Turner, top Pecan Gap 2,795 feet, base Pecan Gap 3,297 feet, sand 3,738-48 feet, initial production 146 bbls. per hour through tubing, total depth 3,748 feet. H. L. Hunt's No. 1 Maxwell, top Pecan Gap 2,700 feet, base Pecan Gap 3,170 feet, sand 3,753-79 feet and 3,780-3,800 feet, initial production 750 bbls. first three hours through tubing, total depth 3,810 feet. H. L. Hunt's No. 1 J. R. Thrash, top Pacan Gap 2,690 feet, base Pecan Gap 3,155 feet, sand 3,737-90 feet, initial production 229 bbls. first hour through tubing, total depth 3,790 feet. Lide and others' No. 3 C. Young, top

Pecan Gap 2,739 feet, base Pecan Gap 3,076 feet, sand 3,696-3,720 feet, initial production 110 bbls. per hour through tubing, total depth 3,729 feet.

Standard Pipe Co.'s No. 1 W. P. Brett, top Pecan Gap 2,670 feet, base Pecan Gap 3,118 feet, sand 3,700-49 feet, initial production 150 bbls. per hour through tubing, total depth 3,749 feet. Turman's No. 1 Robert Dark, top Pecan Gap 2,680 feet, base Pecan Gap 3,115 feet, sand 3,674-83 feet, initial production 32 bbls. per hour through tubing, total depth 3,691 feet. West Texas Refining Co.'s No. 2 Tally, top Pecan Gap 2,537 feet, base Pecan Gap 2,970 feet, sand 3,563-77 feet, initial production 220 bbls. per day on pump, total depth 3,593 feet.

Anderson's No. 3 Thrash, top Pecan Gap 2,700 feet, base Pecan Gap 3,150 feet, sand 3,715-40 feet, initial production 100 bbls. per hour through tubing, total depth 3,761 feet. Foster and Deep Rock Oil Co.'s No. 2 Holland, top Pecan Gap 2,670 feet, base Pecan Gap 3,085 feet, sand 3,662-78-88-3,700 feet, initial production 150 bbls. per hour through casing, total depth 3,720 feet. Gulf Production Co.'s No. 2 Keeling, top Pecan Gap 2,803 feet, base Pecan Gap 3,161 feet, sand 3,785-3,805 feet, initial production 91 bbls. per hour through three-fourths-inch choke on tubing, total depth 3,805 feet.

Haynes and others' No. 1 Lee, top Pecan Gap 2,665 feet, base Pecan Gap 3,119 feet, sand 3,600-46 feet, initial production 72 bbls. first six minutes open through tubing and casing, total depth 3,646 feet. G. M. Pollard's No. 1 Young, top Pecan Gap 2,704 feet, base Pecan Gap 3,085 feet, sand 3,677-99-3,718-50 feet, initial production 105 bbls. per hour through tubing, total depth 3,750 feet. Fox, Butler & Hefflin's No. 1 Thrash, abandoned location.

Smith County

Sinclair Oil & Gas Co.'s No. 2 Mayfield, top Pecan Gap 2,875 feet, base Pecan Gap 3,208 feet, sand 3,843-51 feet, initial production 923 bbls. first 8 hours and 40 minutes open through tubing, total depth 3,851 feet. East Texas Refining Co.'s No. 1 Tyiska, top Pecan Gap 2,820 feet, base Pecan Gap 3,240 feet, sand 3,833-41 feet, initial production 261 bbls. first 30 minutes open through tubing, total depth 3,841 feet.

Cherokee County

Fain & McGaha and Sinclair Oil & Gas Co.'s No. 1 W. A. Shaw, dry and abandoned, total depth 4,017 feet. Sinclair Oil & Gas Co.'s No. 1 C. T. Martin, top Pecan Gap 2,972 feet, base Pecan Gap 3,323 feet, dry and abandoned, total depth 3,999 feet, top sand 3,960 feet.

Rains County

Westbrook Oil Co.'s No. 1 William Cates, dry and abandoned, total depth 4,210 feet.

Red River County

Droppleman & Bunely's No. 1 J. W. Cunningham, dry and abandoned, total depth 2,756 feet.

Gregg County

Gulf Production Co.'s No. 1 Muckleroy, top sand 3,560 feet, initial production 155 bbls. per hour through three-fourths-inch tubing choke, total depth 3,570 feet. Same company's No. 3 Muckleroy, top sand 3,569 feet, initial production 160 bbls. per hour through three-fourths-inch tubing choke, total depth 3,583 feet. Same company's No. 4 Muckleroy, top sand 3,604 feet, initial production 137 bbls. per hour through three-fourths-inch tubing choke, total depth 3,617 feet. Same company's No. 1 Spear, top sand 3,630 feet, initial production 150 bbls. per hour through three-fourths-inch tubing choke, total depth 3,642 feet. Same company's No. 2 Spear, top sand 3,523 feet, initial production 150 bbls. per hour through three-fourths-inch tubing choke, total depth 3,546 feet. Same company's No. 1 Ben Watson, top sand 3,564 feet, initial production 130 bbls. per hour through three-fourths-inch tubing choke, total depth 3,576 feet.

Hawkeye Petroleum Co.'s No. 1 Doc Smith, abandoned location. Humble Oil & Refining Co.'s No. 1 J. A. Knowles, top sand 3,546 feet, initial production 56 bbls. per hour through eleven-sixteenths-inch tubing choke, total depth 3,586 feet. Wise & Jackson's No. 1 Wash Dickey, top sand 3,692 feet, initial production 450 bbls. in six hours through three-fourths-inch tubing choke, total depth 3,696 feet. Texas Pacific Coal & Oil Co.'s No. 1 fee, oil sand 3,565-3,626 feet, initial production 989 bbls. first hour open flowing, total depth 3,626 feet.

Humble Oil & Refining Co.'s No. 1 D. C. Johnson, oil sand 3,599-3,612 feet, initial production 80 bbls. per hour on three-fourths-inch tubing choke, total depth 3,612 feet. Same company's No. 1 T. M. Armstrong, oil sand 3,566-86 feet, initial production 150 bbls. first hour on one-fourth-inch choke, total depth 3,586 feet. Flannery & Bradley's No. 1 W. H. Yorn, oil sand 3,515-89 feet, initial production 1,020 bbls. open first hour and 247 bbls. per hour on 1¾-inch choke, total depth 3,589 feet. Black-Knight Oil Co.'s No. 1 McGrede, oil sand 3,619-51 feet, initial production 108 bbls. per hour on eleven-sixteenths-inch choke, total depth 3,651 feet.

Yount Lee Oil Co.'s No. 1 B. E. Rodden, oil sand 3,575-93 feet, initial production 272 bbls. in 24 hours on one-fourth-inch choke, total depth 3,593 feet. Same company's No. 1-A G. E. Fenton, oil sand 3,590-3,610 feet, initial production 360 bbls. in 24 hours on one-fourth-inch choke, total depth 3,610 feet. Same company's No. 1 Isaac Denson, oil sand 3,639-57 feet, initial production 110 bbls. per hour on eleven-sixteenths-inch tubing choke, total depth 3,657 feet. Sinclair Oil & Gas Co.'s No. 1 Mattie Moncrief, oil sand 3,564-78 feet, initial production 195 bbls. first hour open through 2½-inch tubing, total depth 3,578 feet.

Republic Production Co.'s No. 2 C. Fisher, oil sand 3,461-76 feet, initial production 182 bbls. per hour open through 2½-inch tubing, total depth 3,479 feet. Pilot Oil Co.'s No. 1 Magrill, oil sand 3,523-78 feet, initial production 3,500 bbls. in 11 hours, open and choked, total depth 3,678 feet. Mid-Kansas Oil & Gas Co.'s No. 1 E. M. Nettleton, oil sand 3,454-60 feet, initial production 100 bbls. per hour open through tubing, total depth 3,470 feet. Magnolia Petroleum Co.'s No. 6 B. E. Rodden, oil sand 3,526-40 feet, initial production 670 bbls. per hour open flow, total depth 3,540 feet. Flannagan Production Co.'s No. 1 A. J. Green, oil sand 3,569-96 feet, initial production 103 bbls. per hour on eleven-sixteenths-inch choke, total depth 3,596 feet. F. & M. Drilling Co.'s No. 1 W. L. Blackstone, oil sand 3,569-3,602 feet, initial production 838 bbls. in 33 hours choked, total depth 3,602 feet.

I. C. Little's No. 2 Springhill Church, oil sand 3,587-3,606 feet, initial production 125 bbls. in 15 minutes open flow, total depth 3,606 feet. Delaney and others' No. 1 Homer Clemens, oil sand 3,659-76 feet, initial production 167 bbls. in 15 minutes open, total depth 3,676 feet. Blackstock and others' No. 1 McGrede, oil sand 3,662-75 feet, initial production 94½ bbls. on eleven-sixteenths-inch choke, total depth 3,675 feet. Barnsdall Oil & Refining Co. and others' No. 1 McGrede, oil sand 3,223-54 feet, initial production 650 bbls. per hour open flow, total depth 3,656 feet.

Arkansas Fuel Oil Co.'s No. 1 Castleberry, oil sand 3,596-3,618 feet, initial production 208 bbls. in 15 minutes open, total depth 3,618 feet. Angeline & Burnett's No. 1 McGrede, oil sand 3,608-28 feet, initial production 102 bbls. per hour on eleven-sixteenths-inch choke, total depth 3,628 feet.

PUMP STANDARDS

The Hydraulic Society, composed of leading pump manufacturers, with headquarters at 90 West Street, have just issued the sixth edition of the Standards of the Society covering all principal formulas used in estimating pump performance, standard classifications, general specifications of types and parts for the various type pumps, installation and operating instructions and other data.

This is a valuable reference book for those interested in pumping problems of all kinds and can be secured from C. H. Rohrbach, secretary of the Hydraulic Society, at the above address by sending $1 per copy wanted.

Commission Calls on Purchasers to Assist In Saving Proration

AUSTIN, Tex., May 23.—All purchasers of crude oil in the East Texas Field have been sent a warning by the Texas Railroad Commission that unless conditions in the area are improved proration plans will be endangered.

"Several things, if done, would insure success," the commission's statement says, "and we confidently believe it can and must come from the purchasers and transporters of crude oil who handle the bulk of the production from East Texas. Believing this, we insistently urge prompt action in the form of fair offers to buy prorated oil in substantial amounts and as near posted prices as possible, and on that stabilized basis only with immediate offers to make the necessary connections to take the oil."

Continuing, the statement says: "The effect of such a course is plain. Some purchasers have been holding back, we understand, to see if proration is going to work. It is manifest that if a substantial number stand and wait, the movement must fail for want of support. The commission requests that purchasing companies purchase only such oil as has been produced in conformity with its orders governing proration and that transporting companies refuse to handle any oil that has not been produced in conformity with proration provisions."

Meet in Tyler May 29

The East Texas proration advisory committee will meet in Tyler May 29, according to a call issued by Charles F. Roeser, chairman of the committee, which consists of 11 operators and company representatives. The meeting is called to discuss present proration and present conditions existing in the East Texas district, especially to those which pertain to production and proration.

VENEZUELAN PRODUCTION

Crude oil output in Venezuela during April was the lowest for any month since June, 1928, when 8,339,075 bbls. were produced. Based on number of wells drilling at the end of the month, a further decline in yield is indicated, according to O'Shaughnessy's Bulletin. Output in April totaled 9,262,503 bbls., a daily average of 308,749 bbls. against 10,282,727 bbls., or 331,698 bbls. daily in March. In April, 1930, output totaled 10,724,045 bbls., daily average of 357,468 bbls. During April 5 producing wells were completed as against 11 in the preceding month, and 34 in the corresponding 1930 month. At the end of April, there were 18 wells drilling compared with 19 at the close of the preceding month, and 40 at the end of April, 1930.

ROYAL SHELL INTO GERMANY

Royal Dutch-Shell Co., through a subsidiary, has acquired a number of leases in Hanover, Oldenburg and Brunswick from North European Oil Co. and has begun drilling two wells. It is understood North European company is using the proceeds of the sales to finance its own drilling on its remaining leases.

EAST CENTRAL TEXAS WILDCATS

(Continued from Page 41)

DELTA COUNTY

Delta Development Co.'s No. 2 Mallie Ablowich, 300 ft. S of No. 1 Cooper, Townsite Sur. ..... Coring 3,086 ft.

D. S. Hood's No. 1 J. J. Balser, 185 ft. from S and 580 ft. W of Balser 40-ac. tract in SE cor. T. B. Laddin Sur. ..... Drlg. 1,560 ft.

Worthington and Stadman's No. 1 W. H. Dejehett, 150 ft. from S and 776 ft. from W of 52-ac. tract, E. Chick Sur. ..... Shut down 1,927 ft.

ELLIS COUNTY

E. M. Roger's No. 1 John Lee Winn, 1,650 ft. from E and 510 ft. from S of Orland ..... Shut down 1,360 ft.; drill stem in hole.

FREESTONE COUNTY

Raley and Clark's No. 1 McLancaster (Lampier), 150 ft. from E of W line and center of N and S line, B. Avant Sur. ..... Moving in rig.

E. L. Smith's No. 1 Emily Jackson, center of N 150-ac. of 300-ac. Emily Jackson tract ..... Drlg. 2,275 ft.

GREGG COUNTY

O. O. Alford et al's No. 1 L. M. Colburn, 208 ft. from N and 392 ft. from E of 39.7-ac. tract, Henry Hobson Sur. ..... Rig up.

Arkansas Fuel Oil Co.'s No. 1 Allison et al, 300 ft. from N and 250 ft. from W of tract and survey, William Robinson Sur. ..... Rig up.

Arkansas Fuel Oil Co.'s No. 1 J. C. and R. S. McKinley, 250 ft. from N and 175 ft. from E of 160-ac. tract and 87ac. lease, G. W. Hooper Sur. ..... Drlg. 3,411 ft.; base Pecan Gap 3,006 ft.

Arkansas Fuel Oil Co.'s No. 2 P. D. Harrison, 282 ft. S and 143 ft. E of SE cor. of Tenery 40-ac. tract, William Robinson Sur. ..... Derrick pattern.

Arkansas Fuel Oil Co.'s No. 1 Vonie Calvin, 300 ft. from S and 300 ft. from W of 61-ac. lease and 119-ac. tract, Henry Hathaway Sur. ..... Top Pecan Gap 2,380 ft.; base Pecan Gap 2,840 ft.; top sand 3,507 ft.

P. P. Ash et al's No. 1 A. H. Tubbs, 1,550 ft. from S and 4,120 ft. from E of survey, Dolores Sanches Sur. ..... Derrick.

Badgett and Ward's No. 1 Sample, 655 ft. S and 185 ft. W of SW cor. of A. Z. Jeffrey 29.5 acres, W. P. Chisum Sur. ..... Rigging up.

Branson et al's No. 1 J. J. Fuller, 1,050 ft. from N and 170 ft. from W of survey, M. Alexander Sur. .. Derrick.

C. A. Bryan's No. 1 C. Vernon, 1,240 ft. from E and 151 ft. N of SW cor. of C. Vernon 58.75-ac. tract, W. W. Avery Sur. ..... Derrick.

Bell & Graddy's No. 1 M. George (or Daniels), 225 ft. S and 650 ft. W of 26-ac. tract, Mary Van Winkle Sur. ..... Drlg. 2,160 ft.

B. L. Brookin's No. 1 J. M. Tuttle, 150 ft. from N and 205 ft. from E of 12½-ac. lease, William H. Castleberry Sur. ..... Rig up.

Callahan, Thompson et al's No. 1 Penn, 463 ft. from N and 150 ft. from E, 778 ft. from S of 44.5-ac. tract, David Ferguson Sur. ..... Derrick.

Campbell et al's No. 1 G. M. Collins, 160 ft. from E and 160 ft. from S of 84-ac. tract, G. W. Hooper Sur. ..... Base Pecan Gap 2,960 ft.

Columbia Oil & Gas Co.'s No. 1-A Harley, 650 ft. E and 300 ft. S of SE cor. of Laura Walker 45-ac. tract, William Robinson Sur. ..... Derrick.

Cranfill & Reynolds' No. 1 Clayton heirs, 330 ft. from W of 20-ac. lease, L. B. Outlaw Sur. ..... Coring 3,513 ft.

Cranfill & Reynolds' No. 1 A. D. Porter, 330 ft. from E and 330 ft. from S of 100-ac. tract, G. W. Hooper Sur. ..... Rig up.

Cranfill & Reynolds' No. 1 Susan Scott, 350 ft. from N and 250 ft. from E of survey, David Dalnwood Sur. ..... Top sand 3,565 ft.; T. D. 3,570 ft.

Corley and Blair's No. 1 W. E. Bumpers, 150 ft. from E and 150 ft. from S of 10-ac. lease and 20-ac. tract, William H. Castleberry Sur. ..... Sand 3,566-80 ft.; total depth.

Tom David et al's No. 1 W. S. Pryor, 200 ft. from S and 200 ft. from W of 152-ac. tract, 2,600 ft. from E and 2,350 ft. from N of survey, Hamilton McNutt Sur. ..... Derrick.

Davis and Russell's No. 1 M. E. Anderson, 150 ft. from E and 75 ft. from S of 3-ac. lease in Kilgore Townsite, Mary Van Winkle Sur. ..... Drlg. 3,550 ft.; broken sand 3,518-28 ft.

Doss and Jones' No. 1 Ella Hegler, 400 ft. from N and 500 ft. from W of survey, J. S. Carrithers Sur. ..... Rigging up.

Charles Davidson et al's No. 1 Paul Jones, 7,000 ft. from most southerly N line and 3,600 ft. from W, W. P. Chisum Sur. ..... Drlg. 947 ft.

Daisy Oil Co.'s No. 1 Mrs. H. B. Ware, 1,000 varas from N and 350 ft. from W of survey, Avery B. Johnson Sur. ..... Drlg. 3,250 ft.

Sultan & Daniels et al's No. 1 B. Duncan, 420 ft. from N and 514 ft. from E of 28-ac. tract, G. F. Penn Sur. ..... Set 10-in. csg. 79 ft.

Harry Elliott et al's No. 1 Woodley Jones, 3,125 ft. from N line and 3,720 ft. from E line of William H. Castleberry Sur. ..... Drlg. 2,105 ft.

Harry Elliott's No. 1 McNeely, 150 ft. from N and 150 ft. from E of 7.73-ac. tract, W. P. Chisum Sur. .... Drlg. 3,110 ft.

Eastland Oil & Gas Co.'s No. 1 B. B. Sparks, 150 ft. from N and 150 ft. from W of E 50 acres of 100-ac. tract, Harvey R. Kirk Sur. ..... Location.

Empire Oil & Refining Co.'s No. 1 Otto Lockhart, 150 ft. from E and 150 ft. from S of 75-ac. lease, F. W. Warraner Sur. ..... Moving in.

Merren & Hays' No. 1 Hawkins, 160 ft. W of S line of Hawkins 326-ac. from SE cor. of same, thence 150 ft. at right angles, W. P. Chisum Sur. ..... Top sand 3,647 ft.; T. D. 3,651 ft.

Gulf Production Co.'s No. 1 W. T. Goyne, 330 ft. from E and 330 ft. from S of lease, J. T. McDaniels Sur. ..... Location.

Gulf Production Co.'s No. 1 M. O. Shepherd, 728 ft. from N and 330 ft. from W of 38-ac. lease, George H. Rains Sur. ..... Drlg. 3,150 ft.

Gulf Production Co.'s No. 1 Mary Chavles, 4,150 ft. from E line of survey and 2,100 ft. from N of county line, W. P. Chisum Sur. ..... Base Pecan Gap 2,950 ft.; top sand 3,601 ft.; T. D. 3,610 ft.

Gulf Production Co.'s No. 1 L. S. Fishburn, 330 ft. N and 330 ft. W of NE cor., W. C. Alvice Sur., Francis W. Johnson Sur. ..... Sand 3,556 ft.; total depth.

Harper Petroleum Corp.'s No. 1 Woodley Jones, 2,000 ft. from N line and 3,900 ft. from E line of William H. Castleberry Sur. ..... Derrick.

O. L. Heckman's No. 1 C. H. Moore, 450 ft. W and 150 ft. N of NE cor. of E. M. Woods 39.3-ac. tract, Martha Dillard Sur. ..... Drlg. 2,680 ft.; top Pecan Gap 2,475 ft.

Howard and Russell's No. 1 Stone, 150 ft. from N and 150 ft. from E of 100-ac. tract, Bailey Anderson Sur. ..... Derrick.

Heep Oil Co.'s No. 1 S. B. Hall, 150 ft. from E and 150 ft. from S of lease and survey, David Dainwood Sur. ..... Set 10-in. csg.; T. D. 102 ft.

Humble Oil & Ref. Co.'s No. 1 A. Carter, 780 ft. from S and 150 ft. from W of 93-ac. tract, David Ferguson Sur. ..... Top sand 3,561 ft.; running pipe.

Humble Oil & Ref. Co.'s No. 1 H. M. Lawrence, 540 ft. from N and 219 ft. from W of 100-ac. tract, David Ferguson Sur. ..... Moving in material.

Hurburt and Brown's No. 1 L. L. Mackey, 990 ft. from E and 990 ft. from S of 269-ac. tract, 1,000 ft. from W and 990 ft. from S of survey, G. Y. Chambers Sur. ..... Shut down 2,818 ft.

W. A. Jones' No. 1 G. Davis, 4,575 ft. from most easterly E line and 850 ft. from most northerly S line of lease, W. P. Chisum Sur. ..... Derrick.

K. B. Oil Co.'s No. 1 Dickson, 150 ft. from S and 150 ft. from W of 5-ac. lease, Mary Van Winkle Sur. ..... Derrick.

H. P. Key's No. 1 King, 150 ft. out of SE cor. of 48-ac. tract, W. P. Chisum Sur. ..... Drlg. 3,200 ft.

Kimsey-Trimble's No. 1 Griffith Davis, 922 ft. E of N line of Griffith Davis 119.5-ac. tract from NW cor. of same and 145 ft. S at right angles, W. P. Chisum Sur. ..... Drlg. 1,485 ft.

Kingwood Oil Co.'s No. 1 Godfrey, 1,900 ft. from W line and 6,500 ft. from N line of survey, Mary Van Winkle Sur. ..... Building derrick.

Lacey et al's No. 1 T. D. Anderson et al, 150 ft. from S and 150 ft. from W of 13-ac. tract, G. W. Hooper Sur. ..... Shut down 2,625 ft.; top Pecan Gap 2,463 ft.

J. K. Livingston Oil Co.'s No. 1 D. C. Johnson, 200 ft. from N and 150 ft. from E of survey, Martha Dillard Sur. ..... Derrick.

Magnolia Petroleum Co.'s No. 1 Clem Jones, 150 ft. from E and 150 ft. from S of 65-ac. tract, G. W. Hooper Sur. ..... Rig up.

Magnolia Petroleum Co.'s No. 1 Jessie King, 7,000 ft. from most southern N line and 3,300 ft. from W, W. P. Chisum Sur. ..... Drlg. 2,050 ft.

Magnolia Petroleum Co.'s No. 1 W. B. Goyne, 150 ft. from S and 150 ft. from W of 31.7-ac. tract, J. T. McDaniel Sur. ..... Derrick.

Magnolia Petroleum Co.'s No. 1 Hughey, 330 ft. from N and 330 ft. from W of 80-ac. lease, William McCurry Sur. ..... Drlg. 3,492 ft.

Meek and King's No. 1 Harmony Grove School, 270 ft. from S and 150 ft. from W of 3.7-ac. tract, Mowry Irwin Sur. ..... Drlg. 2,500 ft.

Mid-Kansas Oil & Gas Co.'s No. 2 Barton, 685 ft. S along W line and Hollingsworth survey, from NE cor. W. P. Chisum Sur., thence 150 ft. at right angles, S. P. Hollingsworth Sur. ..... Spudding.

Mid-Kansas Oil & Gas Co.'s No. 1 Durham, 150 ft. from N and 150 ft. from E. W. P. Chisum Sur. .... Top Pecan Gap 2,587 ft.; drlg. 2,925 ft.

Mid-Kansas Oil & Gas Co.'s No. 1 Hughey, 150 ft. from N and 150 ft. from W of tract and survey, James Hillard Sur. ..... Top Pecan Gap 2,430 ft.; drlg. 2,495 ft.

Mid-Kansas Oil & Gas Co.'s No. 1 J. E. Choice, 2,100 ft. S and 500 ft. E of most easterly NW cor. of survey, W. P. Chisum Sur. ..... Derrick

Owens et al's No. 1 C. E. Davis, 200 ft. from N and 340 ft. from E of 37-ac. tract and 18.3-ac. lease, William H. Castleberry Sur. ..... Drlg. 3,130 ft.

Pace et al's No. 1 C. Harrell estate, 300 ft. from E line and 150 ft. from N line of 150-ac. tract, A. M. Coleman Sur. ..... Base Pecan Gap 3,186 ft.; coring 3,805 ft.

Phillips et al's No. 1 M. T. Cole, 200 ft. out of SW cor. of M. T. Cole 320-ac. tract, Judson Meador Sur. ..... T. D. 3,542 ft.; setting 6-in. csg.

Prairie Oil & Gas Co.'s No. 1 Elder, 800 ft. from N and 800 ft. from E lines of survey, William McCurry Sur. ..... Top sand 3,498 ft.; set csg.; T. D. 3,509 ft.

Refugio Oil Corp.'s No. 1 Barber, 150 ft. from N line and halfway between E and W line of lease, Warrener Sur. ..... T. D. 3,499 ft.; set csg.

Rex Drlg. Co.'s No. 1 J. H. and W. E. McHaney, 350 ft. from E and 250 ft. from S of 80-ac. tract, Henry Hathaway Sur. ..... Oil sand 3,496-2,507 ft.; set csg.

Roeser and Pendleton's No. 1 Arthur Christian, 105 ft. from S and 308 ft. from W of 31-ac. lease, H. Hathaway Sur. ..... Rig up.

Ross et al's No. 1, located on Findley & Thomas 50-ac. tract, 150 ft. from S line of 6.66-ac. lease, C. H. Alexander Sur. ..... Derrick.

Roy Roberts et al's No. 1 L. M. Colburn, 150 ft. from E and 150 ft. from S of 45-ac. lease, 5,700 ft. from E and 350 ft. from N of survey, Henry Hathaway Sur. ..... Derrick.

C. Rosenfield et al's No. 1 J. A. Knowles, 700 ft. from E, 1,250 ft. from N, William Lyles Sur. ..... Shut down 3,010 ft.

Rush Bros. et al" No. 1 Arthur Christian, 225 ft. S and 170 ft. E of SE cor. of Randle Christian 32-ac. tract, G. W. Hooper Sur. ..... Preparing to set pipe; oil sand 3,553-87 ft.

Sabine Oil & Gas Co.'s No. 1 Harris, 3,500 ft. E and 3,500 ft. N of NE cor. of S. Lewis Sur., Mary Van Winkle Sur. ..... Derrick.

Seigler and McCall's No. 1 Missie Young, 330 ft. from N and 330 ft. from W of tract and survey, Carl Rhodes Sur. ..... Building derrick.

Selby Oil & Gas Co.'s No. 1 H. R. Snavely, 325 ft. from E and 250 ft. from S of survey, John R. Crosby Sur. ..... Drlg. 2,680 ft.

Shell Petroleum Corp.'s No. 1 G. W. Richey, 150 ft. from E and 150 ft. from S of 60-ac. tract, William Carlton Sur. ..... Set 60 ft. 12-inch csg.

Shell Petroleum Corp.'s No. 2 J. A. Knowles, 150 ft. from E and 400 ft. from S of survey, Allen Norris Sur ..... Drlg. 2,905 ft.

Shell Petroleum Corp.'s No. 1 E. W. Wroughby, 3,725 ft. from W line and 5,400 ft. from S line of survey, Mary Van Winkle Sur. ..... Rigging up.

Smith et al's No. 1 J. B. Doby, 982 ft. from E and 150 ft. from S of 170-ac. tract, William H. Castleberry Sur. ..... Waiting on csg.

E. L. Smith's No. 1 Cole, 893 varas S along E line of Samuel Brooks Sur. from NE cor. of same, thence 107 varas E at right angles, J. Meador Sur. ..... Moving in.

Smitherman and Greer's No. 1 George Jones et al, 330 ft. from S and 359 ft. W of 160-ac. tract and 50-ac. lease, G. W. Hooper Sur. ..... Washing in; T. D. 3,575 ft.

Sinclair Oil & Gas Co.'s No. 1 M. T. Cole, 2,640 ft. from N and 2,742.2 ft. from W line of survey, Samuel Brooks Sur. ..... Fire shot out; shut in.

Smith Ref. Co.'s No. 1 J. A. Knowles, 150 ft. from S, 150 ft. from NW of 75-ac. tract, 5,200 ft. from W, 7,700 ft. from N, Mary Van Winkle Sur. ..... Derrick.

Sun Oil Co.'s No. 2 J. R. Beal, 192 ft. from N and 250 ft. from E line of lease, W. P. Chisum Sur. ..... Top sand 3,579 ft.; coring 3,691 ft.

Sun Oil Co.'s No. 1 G. W. Tate, 250 ft. from N and 250 ft. from E of 64-ac. lease and tract, William H. Castleberry Sur. ..... Straightening hole.

Stanolind and Simms Oil Co.'s No. 1 J. J. Flewellen, 353 ft. from N and 950 ft. from E of 200-ac. lease and 987-ac. tract, Marshall Mann Sur. ..... Drlg. 2,388 ft.

C. S. Thomas et al's No. 1 C. B. Everett, 300 ft. from N and 200 ft. from E of 30.25-ac. tract, John Ruddle Sur. ..... Drlg. 60 ft.

J. Thomas Cox et al's No. 1 Finley and Thomas, 150 ft. from N line and 150 ft. from W line of 3⅛-ac. lease and 50-ac. tract, Charles B. Alexander Sur. .... Derrick.

The Texas Company's No. 1 W. Baxter, 150 ft. from E and 150 ft. from S of lease, Mary Scott Sur. .... Set 10-in. csg.; T. D. 278 ft.

The Texas Company's No. 1 M. T. Cole, 3,400 ft. N and 1,325 ft. E of NE cor. of Samuel Brooks Sur., in the E. L. Walker Sur. ..... Waiting on csg.; T. D. 233 ft.

Turner et al's No. 1 Raden Edwards, 150 ft. from N and 150 ft. from W of tract and lease, Hade Edwards Sur. ..... Building derrick.

Paul Vitek et al's No. 1 Louise Osborne, 150 ft. from E, 150 ft. from S and W 46 acres of 84-ac. tract, 2,000 ft. from W, 450 ft. from S. R. R. Bobbett Sur. .... Coring 3,757 ft.

Valentine Oil Co.'s No. 1 Goyne-Hughey, 6,100 ft. from S and 6,800 ft. from W of survey, Mary Van Winkle Sur. ..... Derrick.

Walker and Harrison's No. 1 E. L. Walker, 1,025 ft. from N and 550 ft. from W of survey, Martha Dillard Sur. ..... Drlg. 2,560 ft.

Wise and Jackson's No. 1 F. J. Glover, 350 ft. from N and 125 ft. from E line of survey, George Melton Sur. ..... Top Pecan Gap 2,440 ft.; cored sand 3,550-53 ft.

H. M. Wages et al's No. 1 Finley and Thomas, 165 ft. from E and 150 ft. from S of 10-ac. lease, Charles H. Alexander Sur. ..... Rig up.

Yount Lee Oil Co.'s No. 1-B R. S. McKinley, 1,993 ft. from S and 2,440 ft. W of NE cor. of 212-ac. tract, William Robinson Sur. ..... Drlg. 2,665 ft.

Yount Lee Oil Co.'s No. 1 Thrasher and Stuckey, 309 ft. from N line and 331 ft. from E line of 80-ac. lease, G. W. Hooper Sur. ..... Derrick.

Ziegler Oil Co.'s No. 1 L. D. Campbell, 540 ft. from N and 519 ft. from E of 72½-ac. tract, David Ferguson Sur. ..... Derrick.

HENDERSON COUNTY

Arcadia Refining Co.'s No. 1 J. M. Dean, 150 ft. from S and 150 ft. from W of 42.75-ac. tract, Simon Boone heirs Sur. ..... Drlg. 2,654 ft.

Westside Investment Co.'s No. 1 Thornhill, 450 varas from W and 400 varas from N line of survey, James Spivey heirs Sur. ..... Location.

HOPKINS COUNTY

Abers, Alsup and Bolling's No. 1 McKay, Blk. 45, Hayden Arnold Sur. in SW cor. ..... Rig up to deepen.

LAMAR COUNTY

K. O. Bundy et al's No. 1 La Gatie, 200 ft. from N and 500 ft. from E of La Gatie tract, John V. Cherry Sur. ..... Moving in rig.

Everett & Allen's No. 1 Guest, 250 ft. S and 2,046 ft. E of 100-ac. tract, L. Roberts Sur. ..... T. D. 2,700 ft.; cored sand 2,696-2,700 ft.

Puritan's No. 1 George Parr, 2,000 ft. from W of Frisco Railway and 1,000 ft. from E line of R. Russell Sur. ..... Ready to spud.

LIMESTONE COUNTY

George McCamey's No. 1 B. K. Arnett, center of Blk. 13 in Casson Townsite ..... Shut down 1,720 ft.

MORRIS COUNTY

Dumas et al's No. 1 Tom Ball, 1,046 ft. from E and 248 ft. from S of 71-ac. tract, A. S. Young heirs Sur. ..... Derrick.

NACOGDOCHES COUNTY

Benedum & Trees' No. 1 Conkwright, 150 ft. from N in center of E and W lines of A. H. Conkwright 100-ac. tract, J. A. Cherino Sur. ..... Drlg. 2,805 ft.

Bunte et al's No. 1 A. F. Boatman, 330 ft. from S and 150 ft. from W of 67-ac. tract, William A. Moore Sur. ..... Shut down 1,605 ft.

Burke et al's No. 1 F. R. Patterson, 6,515 varas from W and 315 varas from W line of Patterson 70-ac. tract, Joseph Las Santos Chay Sur. ..... Shut down 4,270 ft.

E. L. Chapman's No. 1 Tillford Hunt, 1,250 varas from S line and 1,468 varas from W line of survey, Stephen Strode Sur. ..... Shut down 3,300 ft.

Foreman and Weller's No. 1 Norris, 60 ft. NW of E line and 420 ft. S of road in 73.5-ac. tract, Hosea Y. Barbo Sur. ..... Skidding rig.
Fuhram et al's No. 1 Robert Mattaner, NW cor. of 520-ac. tract, J. A. Cherino grant ..... Rig up.
Harwell and Scott's No. 1 R. I. Driver, 1,500 ft. from SE cor. of P. B. Ballard 125-ac. tract, 15 miles SE of Nacogdoches in Patricia De Torres Sur. ..... Drlg. 1,600 ft.
Joiner and Henson's No. 1 Andy Legg, 330 ft. from N and 330 ft. from W of tract, John Durst Sur. .... Drlg. 500 ft.
Joiner et al's No. 1 Reeves, 450 ft. from S and 350 ft. from W of survey, T. G. Loyd Sur. ..... Drlg. 1,700 ft.
J. C. McNeil et al's No. 1 Hayter estate, 1,000 ft. E of Laco Creek and 300 ft. S of Nacogdoches and Jacksonville Highway De Las Santos-Coy Sur. .... Drlg. 1,450 ft.
W. W. Wheeler's No. 1 I. D. Parmley, about 155 varas N of S line and about center of E line of survey, John Kirby Sur. ..... T. D. 3,150 ft.
Sequin's No. 1 Vanover, 6,072 ft. from N and 6,636 ft. from E of Alford Oliver Sur., E. Boyd E 100-ac. tract ..... Location.
Upland Oil Co.'s No. 1 E. M. Cooper, 300 ft. from N line and 300 ft. from E line of tract, James Windsor Sur. ..... Drlg. 1,150 ft.
Adams and Williams' No. 1 Stephenson, 600 ft. from N line and 1,200 ft. from W line of farm, Henry Kaber Sur. ..... Location.
Big Indian Oil Co.'s No. 1 J. N. Stewart, center of 79-ac. tract in the Jose Ignacio Ybarba Sur. ..... Location.

RAINS COUNTY

Berry and Hale's No. 1 Ownsby, 150 ft. N and 1,100 ft. from E of most easterly SE cor. of survey, Alexander Sur. ..... Shut down 2,046 ft.

RED RIVER COUNTY

J. R. Sarland's No. 1 Bryan, 1,200 ft. SW of NE cor. of Bryan 130 acres, P. Vaughn Sur. ..... Derrick up.
Harris & Joiner's No. 1 E. Howison, 225 ft. S. 185 ft. W of 79-ac. tract, William Humphreys Sur. ..... Shut down 2,216 ft.
Pearsons et al's No. 1 J. R. Dellahunty, 500 ft. from N of Isaac Moore Sur. and 200 ft. E of E line of Robert Glass Sur. ..... Drlg. 430 ft.

KILGORE AREA—RUSK COUNTY

Burton Drlg. Co.'s No. 3 E. B. S. Florey, 250 ft. out of NE cor. of Burton Florey 50-ac. lease, Peter Holmes Sur. ..... Location.
Blackwell Oil & Gas Co.'s No. 1 Moore, 4,050 ft. from W and 4,459 ft. from N of survey ..... Drlg. 3,400 ft.
Calloway et al's No. 1 Harmon, 1,800 ft. from E and 6,525 ft. from N of survey, F. Cordova Sur. ..... Drlg. 1,858 ft.
E. L. Chapman's No. 1 Oren Russell, 500 ft. W and 150 ft. S of most easterly NE cor. of Russell 30-ac. tract, J. English Sur. ..... Location.
Cox and Hamon's No. 3 D. M. Peterson, 150 ft. from N and W lines of 40-ac. tract, Isaac Ruddle Sur. .... Moving in material.
Crider and Manly's No. 1 R. A. Motley, 600 ft. from S and 1,150 ft. from W of J. T. McDaniels Sur. .... Derrick.
East Texas Refining Co.'s No. 1 Clara Webb, 150 ft. from N and 150 ft. from E of 15-ac. tract, Thomas Grace Sur. ..... Building derrick.
Harry Elliott's No. 1 Carroll, 175 ft. from N and 200 ft. from E of 7-ac. tract, W. R. Cook Sur. ..... Location.
Elsy Drlg. Co.'s No. 1 George Thompson, 150 ft. from N, 150 ft. from E of tract of 70 acres and 10-ac. lease, 400 ft. S. 500 ft. W. Henry Dobson Sur. ..... Coring 3,650 ft.
Gulf Production Co.'s No. 2 Jernigan, 330 ft. from E and 330 ft. from S of lease, W. W. Simms Sur. .... Location.
Gulf Production Co.'s No. 1 Russell, 150 ft. from the N and W lines of the S. R. W. Smith Sur. ..... Base Pecan Gap 2,965 ft.; coring 3,493 ft.
Heep Oil Co.'s No. 1 Givens, 1,200 ft. from E and 310 ft. from S of survey, Robert W. Smith Sur. ..... Top sand 3,620 ft.; T. D. 3,623 ft.
Houston Production Co.'s No. 1 S. S. Laird, 200 ft. from N and 150 ft. from W of survey, J. McKim Sur. ..... Moving in.
Humble Oil & Refining Co.'s No. 1 First Guarantee Bank of Overton, 330 ft. from S and 330 ft. from W of 80-ac. tract and survey ..... Moving in rig.
Humble Oil & Refining Co.'s No. 1 DeGuerin, 450 ft. from N and 300 ft. from E of 121.8-ac. tract, T. J. Martin Sur. ..... Location.
Humble Oil & Refining Co.'s No. 1 Wilson, 1,950 ft. from E and 1,850 ft. from S of survey ..... Location.
Kirby Petroleum Co.'s No. 1 Jeff Reddie, 150 ft. from N and 150 ft. from W of 97.5-ac. tract, Thomas Grace Sur. ..... Rigging up.
Lyle and Orr's No. 1 Powers, 2,200 ft. from N and 360 ft. from E of survey, J. Womack Sur. ..... Location.
C. H. Lyon's No. 1 Ladd, 177 ft. from N and 177 ft. from W of 2-ac. tract, Henry Hobson Sur. ..... Drlg. 1,800 ft.
Magnolia Petroleum Co.'s No. 1 Florey, 150 ft. from N and E lines of tract, Peter Holmes Sur. ..... T. D. 3,668 ft.; plugged back to 3,647 ft.
Ray Martin's No. 1 Russell, 190 ft. from N and 5,050 ft. from W of survey, T. J. Martin Sur. ..... Location.
Moser's No. 1 Buntyn, 554 ft. from N and 325 ft. from E of survey, the most northeasterly cor. of survey, J. C. Snow Sur. ..... Spudded; shut down.
Rector and Davis' No. 1 Brightwell, 2,300 ft. from S line and 225 ft. from W line of survey, Robert E. Winn Sur. ..... Pecan Gap 2,675-3,070 ft.; T. D. 3,707 ft.
Republic Production Co.'s No. 1 Bean, 1,150 ft. from the N and 50 ft. from the W lines of the J. Lewis Sur. ..... Sand 3,578-3,624 ft.; T. D. 3,632 ft.
Republic Production Co.'s No. 1 Christian, 1,850 ft. from the N and 920 ft. from the W lines of the N. Robert W. Smith Sur. ..... Top sand 3,627 ft.; T. D. 3,632 ft.
Sun Oil Co.'s No. 1 A. A. King, 225 ft. out of SE cor. of A. A. King 100-ac. tract, Peter Holmes Sur. ..... Location.
Stanolind Oil & Gas Co.'s No. 1 O'Quinn, 3,050 ft. from W and 1,900 ft. from S of survey, George Berry Sur. ..... Rig up.
Stanolind Oil & Gas Co.'s No. 1 Beal, 300 ft. from the S and W lines of the lease, W. P. Chisum Sur. .... Derrick.
Texas Pacific Coal & Oil Co.'s No. 1 C. O. Christian, 330 ft. out of NW cor. of lease, Meredith McCabe Sur. ..... Top sand 3,718 ft.
Tidal Oil Co.'s No. 1 J. S. Bean, 1,650 ft. from S, 206 ft. E of NW cor. of 214-ac. tract and lease, 4,925 ft. from S, 1,075 ft. from W. J. Lewis Sur. .... Top sand 3,579 ft.; T. D. 3,653 ft.

JOINER POOL—RUSK COUNTY

Alford et al's No. 1 W. L. Thrash, 1,103 ft. from N, 420 ft. from E of SE cor., B. Smith Sur. ..... Derrick.
Armstrong and Pitt's No. 1 Cooper, 2,150 ft. from W and 166 ft. from N of survey ..... Top Pecan Gap 3,560 ft.; drlg. 3,620 ft.
Armstrong's No. 1 Alford, 151 ft. from S and 1,080 ft. from W of survey, T. J. Moore Sur. ..... Derrick.
Bass et al's No. 1 Alford, 1,760 ft. from E and 5,260 ft. from N of survey, F. Cordova Sur. ..... Top Pecan Gap 2,750 ft.; base Pecan Gap 3,160 ft; preparing to set csg.; T. D. 3,742 ft.
Big Indian Oil Co.'s No. 1 Deason, 360 ft. from E and 4,100 ft. from S of survey, M. J. Prue Sur. ..... Drlg. 2,696 ft.
Campbell Oil Co.'s No. 1 Compton, 600 ft. from N and W line of Simon Del Rio Sur., 1½ miles NW of Minden ..... Derrick.
Cochran and Smith's No. 1 J. P. Cansler, 150 ft. from S and 1,025 ft. from W of 38.5-ac. tract, E. Collard Sur. ..... Drlg. 2,790 ft.
Consolidated Oil Co.'s No. 3 Jobe, 4,500 ft. from W and 3,160 ft. from N of survey, Juan Ximenes Sur. ..... T. D. 3,685 ft.
Consolidated Oil Co.'s No. 4 Jobe, 5,025 ft. from W and 3,160 ft. from N of survey, Juan Ximenes Sur. ..... Swabbed dry through csg.
E. L. Chapman's No. 1 A. P. Finney, 150 ft. from W of E 20 acres of 102-ac. tract, Isaac G. Parker Sur. .. Shut down 3,606 ft. in sand.
F. L. Coogan's No. 1 Florence, 4,480 ft. from W and 4,050 ft. from S of survey, F. Cordova Sur. ..... Drlg. 1,100 ft.
R. H. Deering & Son's No. 1 T. H. Goforth, 150 ft. from S and 150 ft. from W of 22-ac. lease and 62-ac. tract, J. Lindly Sur. ..... Shut down 3,131 ft.
Droppleman Development Co.'s No. 1 Cox, 384 ft. from N and 330 ft. from W of 20-ac. lease or survey, John Darley Sur. ..... Derrick.
Dan Dillon et al's No. 1 W. H. Frederick (Jake), 150 ft. from E, 150 ft. from S of 50-ac. tract, Juan Ximenes Sur. ..... Derrick.
Danciger's No. 1 Deason, 2,925 ft. from S and 650 ft. from W of survey, Juan Ximenes Sur. ..... Swabbed through tubing; dry.
Devonian Oil Co.'s No. 1 Milstead, 200 ft. from S and E lines of J. B. Milstead 90.4-ac. tract in R. H. Pinney Sur. ..... Run tubing; T. D. 3,678 ft.
East Texas Refining Co.'s No. 1 Grissom, 4,500 ft. from W and 5,630 ft. from S of survey, F. Cordora Sur. .. Derrick.
Elliott's No. 1 Alford, 445 ft. N and 194 ft. W of most westerly SW cor. of J. P. Maxwell 144-ac. tract, I. G. Parker Sur. ..... Drlg. 1,800 ft.
Elsy and Tauteaham's No. 1 Deason, 1,300 ft. from W and 3,700 ft. from S of survey, Juan Ximenes Sur. .. Shut down 2,310 ft.
Elsy Drlg. Co.'s No. 1 Frederick, 150 ft. from S and 603 ft. from W of Frederick 90-ac. tract, Juan Ximenes Sur. ..... Derrick.
Empire Oil & Refining Co.'s No. 1 Leverett, 150 ft. from S and 150 ft. from W of survey, J. C. Snow Sur. ..... Drlg. 900 ft.
Great Eastern Oil Co.'s No. 1 Mayfield-Alford, 250 ft. from S and 250 ft. from W of Alford tract, T. J. Moore Sur. ..... Drlg. 1,885 ft.
Green Pine Oil Co.'s No. 1 E. A. Thrash, 150 ft. from S and E lines of Thrash tract in Juan Ximenes Sur. ..... Sand 3,644 ft.; run tubing.
Gulf Production Co.'s No. 1 Keeling, 1,550 ft. from E and 3,950 ft. from S of survey, F. Cordova Sur. .... Drlg. 3,120 ft.
Greely and Baker's No. 1 Thrash, 2,600 ft. from W and 1,850 ft. from N of survey, Juan Ximenes Sur. ..... Drlg. 2,200 ft.
Griffith's No. 1 J. F. Lowe, 800 varas E of W line and 200 varas S of N line of 265-ac. tract, William Williams Sur. ..... Fishing; T. D. 3,705 ft.
Haynes Bros.' No. 1 Cash, 150 ft. from E and 150 ft. from S of 19-ac. tract, F. Cordova Sur. ..... Set csg.; T. D. 3,698 ft.; base Pecan Gap 3,153 ft.
W. B. Hamilton's No. 1 Gambrell, 180 ft. from S and 180 ft. from W of tract, R. McAlnulty Sur. ..... Set csg.; T. D. 3,640 ft.
W. M. Hobson's No. 1 Wilson, 335 ft. from N and 354 ft. from W lines of 31.2-ac. lease in M. J. Prue Sur ..... Sand 3,647-57 ft.; preparing to set csg.; T. D. 3,657 ft.
Humble Oil & Refining Co.'s No. 1 Mattie Wooster, 1,200 ft. from E and 384 ft. from S of survey, W. H. Bears Sur. ..... Location.
Humble Oil & Ref. Co.'s No. 1 Plowman, 163 ft. from S and 1,074 ft. E of NW cor. of M. L. Thompson 129.6-ac. tract, F. Cordova Sur. ..... Drlg. 2,188 ft.
Humble Oil & Refining Co.'s No. 1 Walker, 4,050 ft. from W line and 900 ft. from S of survey, F. Cordova Sur. ..... Drlg. 2,783 ft.
Albert Jones' No. 1 John Minnifee, 100 ft. from S and 1,000 ft. from W of survey on 70-ac. tract, T. J. Walling Sur. ..... Derrick.
C. C. Julian's No. 1 Motley, 780 ft. from N and 1,673 ft. from W of survey, J. T. McDaniels Sur. ..... Set csg.; T. D. 191 ft.
Kirby Petroleum Co.'s No. 1 Samp Stone, 4,100 ft. from W and 3,350 ft. from N of survey, M. J. Prue Sur. ..... Drlg. 860 ft.
Kimbrough et al's No. 1 Weatherby, 300 ft. from N and 300 ft. from E, Robert Martin Sur. ..... Fishing 3,460 ft.
Leonard Petroleum Co.'s No. 1 Sanger Bros., 390 ft. from N and 350 ft. from W of survey, J. P. Meredith Sur. ..... Drlg. 125 ft.
Magnolia Petroleum Co.'s No. 1 Eaton, 5,700 ft. from E and 1,500 ft. from N of survey, F. Cordova Sur. .. Rig up.
Magnolia Petroleum Co.'s No. 2 Moore, 330 ft. S and 448 ft. E of NE cor. of J. Womack Sur., Jesse Ellington Sur. ..... Drlg. 1,410 ft.
Madden et al's No. 1 Mose Mayfield, 960 ft. from S and 160 ft. from W line of 154-ac. lease, Daniel Clark Sur ..... Testing 3,734 ft.
Mass and Tucker's No. 1 Matthews, 3,244 ft. from N, 4,356 ft. from E, Dalines Cartimas Sur. ..... Drlg. 3,176 ft.
G. B. Mitchell et al's No. 1 Ras Pool, 2,700 ft. from E and 4,275 ft. from N of survey, M. J. Prue Sur. .... Drlg. 3,565 ft.
Nat Saddler's No. 1 Ed Sparks, 350 ft. from E, 150 ft. from S of survey, L. C. Riggs Sur. ..... Set 8-in. csg.; T. D. 1,367 ft.
Pace et al's No. 1 Deason, 730 ft. from N and 162 ft. from W of Deason east 52-ac. tract, M. J. Prue Sur. ..... Preparing to run tubing; T. D. 3,703 ft.
Pilot Oil Co.'s No. 1 J. E. Thrash, 205 ft. from N and 650 ft. from E of 62-ac. tract, F. Cordova Sur. ..... Sand 3,767-94 ft.; set csg.
Pharis and Sample's No. 1 Deason, 1,558 ft. E and 155 ft. S of SE cor. of H. Brooks tract in M. J. Prue Sur. ..... Drlg. 3,560 ft.
Phillips Petroleum Corp.'s No. 1 L. J. Pinkston, 590 ft. from N and 231 ft. W of lease, M. J. Prue Sur. ..... Rig up.
Phillips Petroleum Co.'s No. 1 Wilson, 142 ft. from E and 135 ft. from S of Phillips 51-ac. tract, M. J. Prue Sur. ..... Drlg. 3,600 ft.
W. G. Ray Drlg. Co.'s No. 1 Wilson, 335 ft. from S and 240 ft. from W of lease, Richard McAnulty Sur. ..... Set 6-in. csg.; T. D. 3,625 ft.
Rowe et al's No. 1 Maxwell, 855 ft. from E and 227 ft. from S of B. F. Maxwell 59-ac. tract, R. H. Pinney Sur. ..... Derrick.
Southern Crude Oil Purchasing Co.'s No. 1 C. Smith, 330 ft. from S line and 150 ft. from E line of lease, William Killen Sur. ..... Top Pecan Gap 2,775 ft.; coring 2,900 ft.
Stokes et al's No. 1 Mrs. M. M. Talley, 4,100 ft. from W and 1,050 ft. from N of survey ..... Moving in rig.
Sun Oil Co.'s No. 1 Horace Schuler, 3,850 ft. from W and 6,110 ft. from N of survey, J. B. De Cadena Sur. ..... Drlg. 650 ft.
Shell Petroleum Corp.'s No. 1 Abie Holt, 150 ft. from N and 150 ft. from W of lease, Daniel Clark Sur. .. Drlg. 2,775 ft.
Sinclair Oil & Gas Co.'s No. 2 W. D. Kinney, 200 ft. from E and 200 ft. from S of lease, J. B. De Cadena Sur. ..... Preparing to drill plug.
Sinclair Oil & Gas Co.'s No. 1 March, 330 ft. from E and 330 ft. from S of March 441-ac. tract, Leonard Williams Sur. ..... Set surface pipe 270 ft.
Suttle's No. 2 Holland, 156 ft. from N and 152 ft. from W of Holland 41.7-ac. tract, M. J. Prue Sur. ..... Shut down 1,750 ft.
Stanolind Oil & Gas Co.'s No. 1 M. E. King, 330 ft. from N and 330 ft. from W of lease, Meredith McCabe Sur. ..... Drlg. 2,715 ft.
The Texas Company's No. 1 Pinkston, 3,100 ft. from N and 150 ft. from E of survey, J. B. De Cadena Sur. ..... Rig up.
Tidal Oil Co.'s No. 1 Joel Shaw, 1,620 ft. from W and 1,900 ft. from S of survey, E. Collard Sur. ..... Rig up.

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Tidal Oil Co.'s No. 2 Irion, 6,300 ft. from W and 6,500 ft. from N of survey, M. J. Prue Sur. ..... Drlg. 2,436 ft.
Vitek's No. 1 Jobe, 2,950 ft. from W and 3,260 ft. from N of survey, Juan Ximenes Sur. ..... Sand 3,674-75 ft.; preparing to swab.

SMITH COUNTY

Arkansas Drilling Co.'s No. 1 Wallace, 150 ft. from N and 150 ft. from E of 200-ac. tract, W. W. Avery Sur. ..... Waiting on csg.; T. D. 141 ft.
Bailey Gaunce et al's No. 1 S. S. Cook, 150 ft. from S and 150 ft. from W of S. S. Cook 20-ac. tract in 189-ac. tract, Juan Vargus Sur. ..... Shut down 2,560 ft.
Bailey Gaunce et al's No. 1 S. S. Cooke, 150 ft. from S and 150 ft. from W of S. S. Cooke 20-ac. tract in 189-ac. tract, Juan Vargus Sur. ..... Shut down 2,560 ft.
Big Indian Oil Co.'s No. 1 Mills, 1,045 ft. E along S line of C. Mills 67.8-ac. farm, SW cor. of same and 710 ft. N at right angles to S line of 67.7 acres, J. Jordan Sur. ..... Drlg. 2,066 ft.
Big Indian Oil Co.'s No. 1 Holland, 2,384 ft. from N and 1,446 ft. from E line of survey, Thomas Allen Sur. ..... Drlg. 3,770 ft.
G. B. Bunte, trustee's No. 1 A. S. Jarvis, 150 ft. from S and 150 ft. from W of 267-ac. tract, Juan Vargus Sur. ..... Rig up.
E. L. Chapman et al's No. 1 Alexander, 150 ft. out of NE cor. of 40-ac. tract, said 40 acres the NW 40-ac. of survey, H. K. Carson Sur. ..... T. D. 3,509 ft.
Concord Oil Co.'s No. 1 Wolford, 147 ft. from S and 147 ft. from W of Wolford tract, center of 2-ac. lease, James Jordan Sur. ..... Drlg. 1,200 ft.
Cotton Belt Oil Co.'s No. 1 C. S. Jackson, 500 ft. from N and 500 ft. from W of 39.88-ac. tract, Henry Mickleborough Sur. ..... Derrick.
Dumas' No. 1 Cooke, 1,558 ft. SE along center line of Highway No. 64 from point where S. S. Cooke 17.6-ac. tract W line intersects highway and 942 ft. at right angles to road, James Jordan Sur. ..... Drlg. 3,713 ft.
Hancock and McCarthey's No. 1 J. C. Cross, 200 ft. from E of road and 200 ft. N of S line of survey on a 13-ac. tract, Burbridge Sur. ..... Derrick.
Imperator Oil Co.'s No. 1 I. M. Green, 140 ft. from S and 165 ft. from E line of Green 86.5-ac. tract, NW of Overton and N and a little E of Big Indian No. 1 Holland ..... Set 10-in. csg. 180 ft.
Joiner et al's No. 1 W. W. Wright, 847.5 varas from E and 647 varas from S of NW Wright 225-ac. tract, Van Sickle Sur. ..... Chalk 3,780 ft.
Magnolia Petroleum Co.'s No. 1 Roy Loosier, 250 ft. from S and 250 ft. from W of 125-ac. tract or lease, Juan Vargus Sur. ..... Drlg. 2,329 ft.
Magnolia Petroleum Co.'s No. 1 Wright, 150 ft. from N and 150 ft. from W of J. R. Wright 87.9-ac. tract, Juan Vargus Sur. ..... Set csg. 3,687 ft.; T. D. 3,696 ft.
McMillan's No. 1 Wright, 794 ft. from N and 171 ft. from W of T. C. Wright 86-ac. tract, Juan Vargus Sur. ..... Derrick.
Morrison's No. 1 I. Roy, 330 ft. N and E from SW cor. of 87-ac. tract in Henry Cools Sur. ..... Drlg. 1,345 ft.
Owen and Sloan's No. 1-B Starnes, 5,018 ft. from W and 3,080 ft. from N of Samuel Epps Sur. ..... Coring 3,760 ft.
M. M. Rowand et al's No. 1 Gibbons, 1,800 varas from W and 260 varas S of river (which is N line of survey), J. M. Garcia Sur. ..... Drlg. 1,400 ft.
Ruffin and Williams' No. 1 Hamp Florence, 700 ft. from N and 200 ft. from E of 192.5-ac. tract, Barnes Clark Sur. ..... Coring 3,965 ft.
Sinclair Oil & Gas Co.'s No. 1 Mayfield, 2,194 ft. from N and 3,625 ft. from W of 376-ac. Mayfield lease, James Jordan Sur. ..... Derrick.
Sinclair Oil & Gas Co.'s No. 1 Patterson, 300 ft. from E and 150 ft. from S of farm, Juan Vargus Sur. ..... Drlg. 3,600 ft.
E. L. Smith's No. 1 William Stone, 330 ft. from E and 150 ft. from S of survey, D. Campbell Sur. ..... Drlg. 3,401 ft.
Sun Oil Co.'s No. 1 J. Henson, 600 ft. from E and 6,700 ft. from S of survey, Juan Vargus Sur. ..... Drlg. 850 ft.
Sun Oil Co.'s No. 1 A. V. Rick, 205 ft. from N and 300 ft. from W of 99-ac. tract, Juan Vargus Sur. ..... Drlg. 3,578 ft.
Sun Oil Co.'s No. 1 J. J. Denton, 250 ft. from the N and 288 ft. from E lines of 114.2-ac. tract in Juan Vargus Sur. ..... Drlg. 3,440 ft.
Winona O. & G. Co.'s No. 1 Freeman, 150 ft. from S. W of 89-ac. tract in A. J. Legrone Sur., 4 miles SE of Winona ..... Shut down 3,681 ft.
Witherspoon Oil Co.'s No. 1 T. O. Wright, 150 ft. from NE cor. of Sinclair-Wilson lease, 1,340 ft. from W and 225 ft. N at right angles, Juan Vargus Sur. ..... Sand 3,666-72 ft.; set 6-in. csg. 3,630 ft.

TITUS COUNTY

H. V. Cook's No. 1 M. C. Rogers, center of SW of Moore Sur. ..... Moving in rig.

UPSHUR COUNTY

Arcadia Refining Co.'s No. 1 R. S. Johnson, 1,000 ft. from N and 1,000 ft. from E of survey, J. H. Mallory Sur. ..... Drlg. 2,770 ft.
Brennan and Wood's No. 1 Robertson, center of Robertson 41-ac. tract, Ira Stephenson Sur. ..... Shut down 3,602 ft.
Joe Burnham's No. 1 Lena Beck, 4,000 ft. from S and 1,200 ft. from W of survey, H. W. Augustine Sur. ..... Moving in rig.
Cockrell et al's No. 1 C. A. Lee, 150 ft. from S and 150 ft. E of 26½-ac. tract, W. L. Palmer Sur. ..... Derrick.
Crockrell et al's No. 1 C. A. Gee, 150 ft. out of SE cor. of 26-ac. tract, 6 miles N of Gladewater, W. W. Parmer Sur. ..... Derrick.
Daniel and Hargrove's No. 1 Ann Callahan, 150 ft. from E and 150 ft. from S of 38-ac. tract, E. A. J. Evans Sur. ..... Derrick.
Decker et al's No. 1 T. A. Webb, 150 ft. from N and 150 ft. from W of 34.25-ac. tract and lease, G. H. Hooper Sur. ..... Moving in.
Dumas et al's No. 1 A. O. Phillips, 150 ft. from N and 150 ft. from E of W 25.2-ac. of 75-ac. tract, S. Harrell Sur. ..... Derrick.
Fleetburn Oil Corp.'s No. 1 J. K. Edwards, 250 ft. from SE and 250 ft. from S of E 81 acres of 281-ac. tract, David Ferguson Sur. ..... Base Pecan Gap 2,969 ft.; top sand 3,586 ft.
J. W. Green's No. 1 J. W. Wooden, 200 ft. from E and 200 ft. S of survey, Isham Williams Sur. ..... Shut down 100 ft.
Home Oil Co.'s No. 1 F. D. Futrell, 150 ft. out of SW cor. and 520 ft. from E and 400 ft. from S line of 7.6-ac. tract, A. Lumbrara Sur., south of Gilmer ..... Rig up.
Humble Oil & Refining Co.'s No. 1 J. K. Edwards, 325 ft. out of SE cor. of the W 200 acres of the 281-ac. tract, B. Ferguson Sur. ..... Moving in rig.
Magnolia Petroleum Co.'s No. 1 Howard Hampton, 150 ft. from N and 150 ft. from E of most north NE cor. of 69-ac. lease and tract, David Ferguson Sur. ..... Building derrick.
Magnolia Petroleum Co.'s No. 2 Howard Hampton, 215 ft. from NW and 215 ft. from SW of 169-ac. lease, David Ferguson Sur. ..... Location.
McMahon and McCollough's No. 1 E. H. Hamilton, 200 ft. from E and 150 ft. from S of 88-ac. tract, M. Chandler Sur. ..... Derrick.
McPhail and Smith's No. 1 Kay, 660 ft. from S and 660 ft. from W line of J. Elliott Sur., 1½ miles S of Big Sandy ..... Shut down 2,810 ft.

E. R. Perkins et al's No. 1 Kay, 660 ft. from S and 660 ft. from W of survey, Thomas J. Elliott Sur. .. Shut down 2,820 ft.
A. A. Trammell's No. 1 O. M. Victory, 150 ft. from E and 150 ft. from S of SW 100 acres of survey, E. A. J. Evans Sur. ..... Rig up.
H. H. Trammell's No. 1 Mary A. Victor, 150 ft. out of SE cor. of SE 40 acres and E 100-ac. tract of W 200 acres of Mary Victor Sur., E. J. Evans Sur. ..... Moving in rig.
Union Drilling Co. et al's No. 1 W. M. Phillips, 300 ft. from E and 300 ft. from S of 67½-ac. tract and lease, H. Edwards Sur. ..... Location.
R. M. Weaver, Jr. et al's No. 1 L. J. Everett, 330 ft. from E and 330 ft. from S of 173-ac. tract, W. Goodwin Sur. ..... Derrick.

VAN ZANDT COUNTY

Barton et al's No. 1 C. L. Hubbard, 600 ft. out of NE cor. of Hubbard 225-ac. tract, 3½ miles S of Canton, M. J. Cadena Sur. ..... Rigging up.
J. C. Fare's No. 1 P. S. Hand, C of Hand's 50-ac. tract, William Shuman Sur. ..... Shut down 5,160 ft.
Hart Petroleum Corp.'s No. 1 M. L. Cox, 1,785 ft. N of S line and 524 ft. E of W line of Cox 300-ac. tract in Nugent Headright Sur. ..... Shut down 1,142 ft.
H. Helms et al's No. 1 Bogue, 647 ft. W and 155 ft. S of SE cor. of J. M. Brown 70-ac. in Marshall University Sur., SE of Van ..... Shut down 3,098 ft.
Joiner et al's No. 1 J. S. Meeks, 330 ft. out of the NE cor. of the 330-ac. tract, A. Ducher Sur. ..... Drlg. 1,400 ft.
Humble Oil & Ref. Co.'s No. 1 L. A. Dowdle, 1,027 ft. N of S line and 150 ft. E of W line, William Daniel Sur ..... Temp. abnd. 2,987 ft.
Humble Oil & Ref. Co.'s No. 1 York, 150 ft. from E and 175 ft. from S, William Daniel Sur. ..... Drlg. 2,050 ft.
Kelly Oil & Gas Co.'s No. 1 Lemsford, center of Lemsford tract, John Conner Sur. ..... Shut down 2,300 ft.
Nell McMehory's No. 1 R. V. Murphy, 150 ft. from N and 150 ft. W of survey, H. Bailey Sur. ..... Shut down 2,450 ft.
W. P. Palmer et al's No. 2 W. P. Forster, 600 ft. from N and 450 ft. from E of SW cor. of Forster 151-ac. tract in the F. Montgomery Sur. ..... Drlg. 2,310 ft.
W. A. Phillips et al's No. 1 Morris, 1,050 ft. S of N line and 350 ft. W of E line of center west of Morris 160-ac. tract in the C. L. Morris Headright Sur. .... Old well being drilled deeper; rigging up.
Pure Oil Co.'s No. 2 Shivers, 200 ft. S of N line and 200 ft. E of W line of lease, John Walling Sur. .... Location.
Pure Oil Co.'s No. 3 R. C. Crim, 250 ft. N of S line and 250 ft. W of E line of lease in Nacogdoches County School Land Sur. ..... Preparing to swab; T. D. 3,979 ft.
Pure Oil Co.'s No. 1 B. W. Russell, 650 ft. W of E line and 150 ft. S of N line of lease in David Rose Sur. ..... Drlg. 2,565 ft.
Pure Oil Co.'s No. 7, 370 ft. N of S line and 200 ft. W of E line of 109-ac. tract, John Walling Sur. .... Location.
Pure Oil Co.'s No. 2 A. D. Clark, 70 ft. N of S line and 120 ft. E of W line of lease, J. Walling Sur. ..... Location.
Pure Oil Co.'s No. 8 W. T. Jarman, 325 ft. S of N line and 250 ft. E of W line of lease in Nacogdoches County School Land ..... Derrick.
Pure Oil Co.'s No. 5 R. L. Wells, 220 ft. W of E line and 94 ft. S of N line of lease in Mund Gross Sur ..... Drlg. 2,295 ft.
Pure Oil Co.'s No. 3 L. A. Smith, 707 ft. S of N line and 250 ft. W of E line of lease in John Walling Sur. ..... Rigging up.
Van Oil Association's No. 1 Tankersley, 200 ft. from E and 1,000 ft. from S of farm, L. Landers Sur. .... Shut down 1,028 ft.

WOOD COUNTY

Loche & Clark's No. 1 A. C. Pick, 165 ft. S of NE cor. G. C. Reeves 25-ac. tract, Daniel Fuller Sur. .... Shut down 2,008 ft.
Deep Rock Oil Co.'s No. 1 Maud Smith, center of Maud Smith S 40-ac. tract, L. Johnson Sur. ..... Top Pecan Gap 2,785 ft.; base Pecan Gap 2,985 ft.
Vitek Oil Co.'s No. 1 Rosa Bogel, 250 ft. from N and 500 ft. from W of survey, Sarah English Sur. ..... Spudded; shut down.

WILDCAT OPERATIONS IN TEXAS PANHANDLE

(Continued from Page 46)

Steckoll & Reiger's No. 1 Short, 330 ft. S and W, Sec. 17, B. E. Chaney Sur. ..... Moving in material.
Sullivan & Ochiltree's No. 1-A Morse, 330 ft. S and W, N½ NE, Sec. 15, Blk. A-9, H.&G.N. Sur. ..... S.D. 2,636 ft.
Warner Oil Co.'s No. 1 Morse, 330 ft. S and W, N½ NW, Sec. 68, Blk. 25, H.&G.N. Sur. ..... Cellar.

HUTCHINSON COUNTY

Danciger O. & R. Co.'s No. 1 Johnson, 330 ft. N and W, SE, Sec. 34, Blk. Y, A.&B. Sur. ..... Rig on ground.
Deal O. & G. Co.'s No. 2 Sanford, 330 ft. N and E of N 80 ac., S 160 ac., Sec. 31, Blk. 46, H.&T.C. Sur. .. S.D. 450 ft.
Huber Prod. Co.'s No. 1 Johnson Bros. (Premier), 330 ft. N and E of W 60 ac., N 80 ac., NW, Sec. 3, Blk. Y, A.&B. Sur. ..... Big gas 2,230 ft. and 2,395 ft; drlg. 2,765 ft.
Huber Pet. Co.'s No. 1 McIlroy, 330 ft. S, 330 ft. W, Sec. 28, Blk. Y, A.&B. Sur. ..... T.D. 3,205 ft; to plug back for gas.
Liner et al's No. 1 Johnson Bros., 990 ft. S, 330 ft. E, W½ SE, Sec. 29, Blk. Y, A.&B. Sur. ..... Spudded and S.D.
Stanolind O. & G. Co.'s No. 2-A Pitcher, 990 ft. S, 330 ft. W, SE, Sec. 19, Blk. M-21, T.C.R.R. Sur. ..... Plugged back 3,135 ft; swabs 20 bbls. per hr.; T.D. 3,150 ft.
Harry Steckel's No. 4 Whittenburg, 990 ft. N, 330 ft. E, NE, Sec. 39, Blk. Z, L.C.&S.F. Sur. ..... S.D. 3,010 ft.
Skelly Oil Co.'s No. 1 Johnson Bros., 660 ft. S and W, SE, Sec. 30, Blk. Y, A.&B. Sur. ..... S.D. 3,115 ft.
Timms-Deatch's No. 4 Moore, 330 ft. N and W, Sec. 124, Blk. 4, I.&G.N. Sur. ..... Rig.

LIPSCOMB COUNTY

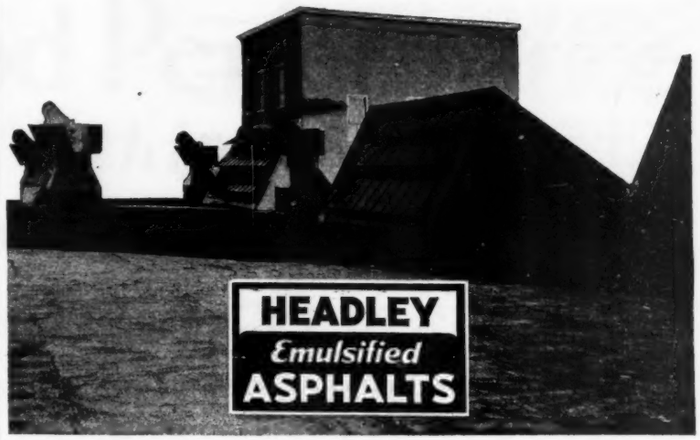
Okla. Public Service Co.'s No. 1 C. W. Jones, NE SW, Sec. 100, H.&T.C. Sur. ..... T.D. 5,003 ft.

LUBBOCK COUNTY

Center Oil Co.'s No. 1 Bowles Ranch ..... Small S.O. 1,133-40 ft; S.D. 4,-167 ft.

MOORE COUNTY

Cloud & Dana's No. 1 Jones, 330 ft. N and E, SW, Sec. 169, Blk. 3-T, T.&N.O. Sur. ..... T.D. 3,220 ft; estimated 74,000,-000 ft. gas.
Dana O. & G. Co.'s No. 1 R. Utey, 330 ft. S and W, NE, Sec. 135, Blk. 3, T.&N.O. Sur. ..... T.D. 3,526 ft; making 5 bbls. wtr. and 1 bbl. b.s. per day.
Gulf Prod. Co.'s No. 2 Kilgore, C SE, Sec. 29, Blk. P.Mc., E.L.R.R. Sur. ..... Drlg. 3,262 ft; 11,000,000 ft. gas.
Interstate's No. 1 Nield, C NE, Sec. 18, Blk. 44, H.&T. C. Sur. ..... Location.
Magnolia Pet. Co.'s No. 1 Jones, 330 ft. N, 330 ft. E, Sec. 170, Blk. 3-T, T.&N.O. Sur. ..... Rigging up.
Sunray Oil Co.'s No. 1 Rupert, 660 ft. N, 330 ft. E, NW, Sec. 191, Blk. 3-T, T.&N.O. Sur. ..... Cellar.
Plains Holding Co.'s No. 2 Bivins, 1,115 ft. S, 627 ft. E, Sec. 93, Blk. 46, H.&T.C. Sur. ..... Fishing 2,143 ft; 3,000,000 ft. gas 2,135 ft.
Sunray Oil Co.'s No. 2 Jones, 330 ft. N and W, W½ SW, Sec. 164, Blk. 3-T, T.&N.O. Sur. ..... Rig on ground.
The Texas Co.'s No. 1 Jester, C SW, Sec. 14, Blk. 6-T, T.&N.O. Sur. ..... Gas 2,296-2,300 ft; drlg. 2,660 ft.



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The simplicity of using Headley Emulsified Asphalts is typically shown in the lower illustration.

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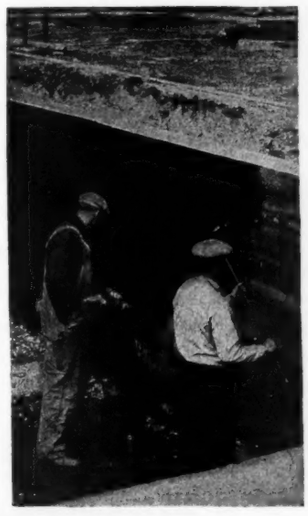

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Texas Interstate P. L. Co.'s No. 1-26 Thompson, C N½, NE. Sec. 26, Blk. 44, H.&T.C. Sur. ..... Location.
Texas Interstate P. L. Co.'s No. 1-33 Sneed, C SW, Sec. 33, Blk. 6-T, T.&N.O. Sur. ..... Location.
Texas Interstate P. L. Co.'s No. 1-37 Sneed, C NW, Sec. 37, Blk. 6-T, T.&N.O. Sur. ..... Location.
Texas Interstate P. L. Co.'s No. 2-55, C SE, Sec. 55, Blk. 6-T, T.&N.O. Sur. ..... Location.

MOTLEY COUNTY

Matador Oil Corp.'s No. 1 Owens, C NE, Sec. 10, Blk. G, B.&B. Sur. ..... S.D. 530 ft.

OLDHAM COUNTY

Amalgamated German-American Oil Corp.'s No. 1 Norton, 330 ft. S and E, Sec. 12, T.&N.O. Sur. ..... S.D. 400 ft.
Chambers et al's No. 1 Herring, CNL, Sec. 30, Blk. 8, G.C.&S.F. Sur. ..... S.D. 800 ft.

ROBERTS COUNTY

Chicken Creek Oil Co.'s No. 1 Ledrick, 330 ft. N and W, Sec. 55, Blk. C, G.&M. Sur. ..... Rigging up standard tools.
Travis et al's No. 1 Cunningham, 330 ft. S and W, Sec. 74, Blk. M-2, H.&G.N. Sur. ..... Fishing bit 2,250 ft.

WHEELER COUNTY

Clarity et al's No. 1 Porter, NW cor. SE, Sec. 2, Blk. A-9, H.&G.N. Sur. ..... Rig.
Vollmert's No. 1 Porter, 330 ft. S and E, NE, Sec. 15, Blk. 27, H.&G.N. Sur. ..... Rigged up and S.D.

WILDCAT OPERATIONS IN WEST TEXAS

(Continued from Page 46)

Tri-State Oil Co.'s No. 1 Bobadella, 1,325 ft. from S and E lines Sur. 254, S.F. No. 7,247 ..... Fishing 615 ft.

FISHER COUNTY

Stanolind Oil & Gas Co.'s No. 2 Steele, 1,300 ft. E and 330 ft. N of SW cor. Sec. 210, B.B.B.&C. Sur. ..... Top lime 1,600 ft.; shut down 3,015 ft.; show oil 2,934-84 ft.
The Texas Company's No. 1 Jean, 330 ft. from E and 400 ft. S of Sec. 201, Blk. 1, B.B.B.&C. Sur. ..... Drlg. 1,460 ft.

GAINES COUNTY

Landreth Prod. Co.'s No. 1 Alley, 660 ft. from N and W of Sec. 2, Blk. A-30, P.S.L. Sur. ..... Drlg. 1,655 ft.
Texas Consolidated Oil Co. et al's No. 1 Jones, 2,310 ft. from NE Sec. 4, Blk. A-8, P.S.L. Sur. ..... Shut down 2,435 ft.

GARZA COUNTY

Pandem Oil Corp.'s No. 1 Justice, 330 ft. from S and W of Sec. 12, Blk. 4, H.&G.N. Sur. ..... Spudded and shut down.
Perry & Posey's No. 1 Justice, 1,980 ft. from S and 1,650 ft. from E of Sec. 25, Blk. 6, H.&G.N. Sur. (3,500-ft. cable tool test) ..... Shut down 2,980 ft.

HOWARD COUNTY

Continental Oil Co.'s No. 1 Brindley, 660 ft. from S and E of Sec. 18, Blk. 33, Twp. 1s, T.&P. Sur. ..... Shut down 3,084 ft.
Green O. & R. Co.'s No. 1 Denman, 990 ft. from S and 2,310 ft. from W Sec. 14, Blk. 30, Twp. 1s, T.&P. Sur. ..... Spudded and shut down.

HUDSPETH COUNTY

Henshaw's No. 1 Love, C NE Sec. 9, Blk. 67½, P.S.L. Sur. ..... Drlg. 292 ft.
Patillo & Welch's No. 1 Briggs, 300 ft. from S and W Sec. 18, Blk. 73, Twp. 7, T.&P. Sur. ..... Shut down 676 ft.
Theison's No. 1 University, 3,050 ft. from S and 2,225 ft. from E of Sec. 17, Blk. E ..... Spudded 35 ft. and shut down.

IRION COUNTY

Central Oil Co.'s No. 2 Horney, 150 ft. from N and 1,320 ft. from E Sec. 2, Blk. 3, H.&T.C. Sur. ..... Fishing 1,530 ft.
Davis et al's No. 1 Suggs, 1,560 ft. from S and 925 ft. from W, Sec. 3,081, Blk. 28, H.&T.C. Sur. ..... Drlg. 330 ft.
Dixie Oil Co.'s No. 1 Williams, 1,320 ft. from S and E of Sec. 1,196, T.T.R.R. Sur. ..... 300 ft. oil in hole from 4,155-63 ft.; top Pennsylvanian 4,875 ft.: drlg. 5,785 ft.
Fox's No. 1 Horney, 1,520 ft. from N and 1,525 ft. from W Sec. 2, Blk. 3, H.&T.C. Sur. ..... Shut down 1,035 ft.
Straughn & Texannati Oil Co.'s No. 1 Tankersley, 150 ft. from S and 750 ft. from W of Sec. 4, Gonsales County School Land ..... Plugging back to 1,320 ft. to shoot; total depth 1,506 ft.

JONES COUNTY

Abers et al's No. 1 Burton, 150 ft. from S and 175 ft. from E of 43.4-acre tract in G. Martinez Sur. ..... Running 10-in. casing 528 ft.
Barney & Duffy's No. 2 King, 3,700 ft. from N and 200 ft. from E, Subd. No. 18, M. Bueno Sur. ..... Location.
Union Oil Co.'s No. 2 King, 4,100 ft. from N and 200 ft. from E, Subd. 18, Bueno Sur. ..... Material.
Andy Urban's No. 1 Riddle, 300 ft. from S and 150 ft. from E, Subd. 2, A. W. Hill Sur. ..... Drlg. 1,475 ft.
Young & McNeil's No. 1 L. R. Cade, 150 ft. from N and 450 ft. E of NW cor. of J. A. Williams 200-acre tract in Sec. 17, but in Sec. 12, Blk. 19, T.&P. Sur. ..... Drlg. 2,285 ft.

LOVING COUNTY

Eppenauer et al's No. 2 Allen, 2,310 ft. from NE and 330 ft. from NW Sec. 90, Blk. 1, W.&N.W. Sur. ..... Shut down 4,140 ft.; drlg. cement plug.
Ervin & Mahres' No. 1 Thrope, 2,310 ft. from E and 330 ft. from S Sec. 46, Blk. 53, T.&P. Sur. ..... Shut down 810 ft.
Ervin & Mahres' No. 1 Meyer, 990 ft. NE and 330 ft. SE of Sec. 3, Blk. 2, W.&N.W. Sur. ..... Location.
Falbre & Evans' No. 1 Dean, 330 ft. from NE and 990 ft. from NW Sec. 79, Blk. 33, H.&T.C. Sur. ..... Shut down 1,465 ft.
Hoffman et al's No. 2 Ramsey et al, 2,310 ft. from NE and 330 ft. from SE Sec. 83 ..... Drlg. 2,861 ft.
Irwin et al's No. 1 Auld, 1,825 ft. from NE and 1,298 ft. from NW Sec. 67, Blk. 1, W.&N.W. Sur. ..... Rig up.
Lockhart & Co.'s No. 3 Bowen & Wells, 330 ft. from NE and SE of Sec. 92, Blk. 1, W.&N.W. Sur. ..... Shut down 4,050 ft.
Lockhart & Co.'s No. 2 fee, 676 ft. S, 330 ft. W Sec. 91, Blk. 1, W.&N.W. Sur. ..... Rigged up and shut down.
Lockhart's No. 1 Bell, 1,721 ft. from NE and 410 ft. from SE Sec. 91, Blk. 1, W.&N.W. Sur. ..... Drlg. 4,123 ft.
Martin et al's No. 1 Johnson, 1,350 ft. from NW and 330 ft. from SW Sec. 86, Blk. 1, W.&N.W. Sur. ..... Location.
Richmond Drlg. Co.'s No. 1 Russell, 990 ft. from NE and 330 ft. from NW Sec. 80, Blk. 31, W.&N.W. Sur. ..... Drlg. 3,536 ft.
Rush et al's No. 1 Wheat, 330 ft. from NW and SW Sec. 77, Blk. 1, W.&N.W. Sur. ..... Cellar.
Slagel Drlg. Co.'s No. 1 Cartwright et al, 2,310 ft. from S and 990 ft. from W Sec. 1, Blk. 57, Twp. 1, T.&P. Sur. ..... Total depth 3,182 ft.; plugged back to 3,174 ft.; testing, cleaning out.
W. A. Suddreth et al's No. 1 Capitola Pool, 2,970 ft. from NE and 990 ft. from NW Sec. 73, Blk. 33, H.&T.C. Sur. ..... Shut down.
Tennant et al's No. 1 Martin, 990 ft. from NW and SW Sec. 66, Blk. 1, W.&N.W. Sur. ..... 10-in. set 630 ft.; shut down.
California Co.'s No. 2 Allen, 2,191 ft. from NW and 2,152 ft. from SW Sec. 90, Blk. 1, W.&N.W. Sur. ..... Drlg. 2,895 ft.
California Co.'s No. 4 Allen, 3,121 ft. from NW and 2,112 ft. from SW Sec. 90, Blk. 1 ..... Top salt 855 ft.; drlg. 2,815 ft.

MENARD COUNTY

Priest's No. 1 Sorrel, 1,000 ft. from E and 200 ft. from S cor. Sec. 132, E.L.R.R. Sur. ..... Drlg. 2,840 ft.

PECOS COUNTY

Dittman's No. 1 Sanford, 330 ft. from NW and 1,650 ft. from NE of Sec. 55, Blk. 10, H.&G.N. Sur. ..... Location.
Hagen et al's No. 1 Shearer, 660 ft. from SE and 660 ft. from SW Sec. 45, Blk. 16, H.&G.N. Sur. ..... Top salt 1,035 ft.; drlg. 1,822 ft.
Honolulu Oil Co.'s No. 1 Webb, 2,140 ft. from N and 1,000 ft. from W of Sec. 105, Blk. OW, G.&S.&S.F. Sur. ..... Drlg. 747 ft.
J. R. Miller et al's No. 1 Bennett, 359 ft. W of CWL Sec. 1, Blk. 119, G.C.&S.F. Sur. ..... Shut down 3,283 ft. for casing.
Penn Oil Co. et al's No. 1 Alvis, 2,358 ft. from S and 1,327 ft. from W Sec. 155, Blk. 3, T.&P. Sur. ..... Show oil 3,601-03 ft.; drlg 3,626 ft.
Perren Oil Co.'s No. 2 Eaton, S of E Sec. 27, Blk. 3, H.&T.C. Sur. ..... Fishing 1,765 ft.
Pure Oil Co.'s No. 1 Harrison, 2,310 ft. from N and 330 ft. from W of Sec. 203, Blk. 3, T.&P. Sur. ..... Shut down 5,000 ft.
California Co. et al's No. 1 Thomas, 990 ft. from NW and SW Sec. 31, Blk. 34, H.&T.C. Sur. ..... Location.
Whitaker et al's No. 1 Mary Devlin, 150 ft. from N and 150 ft. from E Sec. 69, F. Hernandes Sur. ..... Shut down 420 ft.

REAGAN COUNTY

Big Lake Oil Co.'s No. 6-C University, 1,120 ft. S and 1,100 ft. from W Sec. 25, Blk. 9 ..... Location.

REEVES COUNTY

R. T. Hansford's No. 1 Williams, 150 ft. from S and W Sec. 17, Blk. 6, H.&G.N. Sur. ..... Shut down 580 ft.
Humble Oil & Ref. Co.'s No. 1 Bolmorhea Livestock Co., 1,320 ft. from N and 1,320 ft. from W Sec. 33, Blk. 5, H.&G.N. Sur. ..... Drlg. 860 ft.
Lee O. White et al's No. 1 Hershersor, 330 ft. from N and W lines of Sec. 5, Blk. 51, Twp. 10, T.&P. Sur. ..... Drlg. 4,529 ft.
California Co.'s No. 2 Kloh & Rumsey, 990 ft. from S and 1,520 ft. from E Sec. 11, Blk. 74, Twp. 4, T.&P. Sur. ..... Top salt 2,675 ft.; drlg. 4,378 ft.

RUNNELS COUNTY

Dutton et al's No. 1 Dean, 5,475 ft. from NE and 1,048 ft. from NW in J. Heil Sur. No. 419 ..... Shut down 2,335 ft.; testing water shutoff.

SCHLEICHER COUNTY

Eastland Oil Co.'s No. 1 Joe Tisdale, C Sec. 29, Blk. M, G.H.&S.A. Sur. ..... Shut down 2,509 ft.
Wesner et al's No. 1 Nicks, 2,310 ft. from N and 2,362 ft. from E of Sec. 77, Blk. LL, T.C. Sur. ..... Drlg. 3,785 ft.
George Wilson's No. 1 Page, Sec. 40, Blk. L, 1,320 ft. from N, 1,570 ft. from W, G.H.&S.A. Sur. ..... Shut down 5,053 ft.

SCURRY COUNTY

G. E. Dickman and R. B. Pender et al's No. 1 F. C. Davis, 1,000 ft. N and 1,770 ft. W of SE cor. of Sec. 275, Blk. 2, H.&T.C. Sur. ..... Shut down 5,100 ft.
Scurry County Oil Exchange's No. 1 Earnest, 2,310 ft. from N and W Sec. 68, Blk. 3, H.&G.N. Sur. ..... Spudded and shut down.
Seifert & Dibble's No. 1 T. M. Blackburn, 2,310 ft. from N and 2,310 ft. from W line of Sec. 153, Blk. 97, H.&T.C. Sur. ..... Shut down 3,375 ft.
Simon & Brock et al's No. 1 Cruse, 2,310 ft. from S and E Sec. 119, Blk. 97, H.&T.C. Sur. ..... Spudded and shut down.

TAYLOR COUNTY

John B. Jameson's No. 1 Webb, 1,170 ft. S and W of NE cor. Sec. 46, Lunatic Asylum Land ..... Shut down 6,396 ft.
Sanger et al's No. 1 City of Abilene, 330 ft. from S and 1,400 ft. from E of Sec. 66, Blind Asylum Land ..... Shut down 2,785 ft.

TERRELL COUNTY

Big Bend Oil Co.'s No. 1 Bassett, C NW Sec. 155, Blk. D, M.-K.-T. Sur. ..... Shut down 2,669 ft.
Keck Pecos Trust Co.'s No. 1 Hamlin, C Sec. 5, Georgetown Ry. Sur. ..... Shut down 3,150 ft.
Miller Bros. No. 1 Allison & Burke, C NW cor. Sec. 10, Blk. 176, T.&P. Sur. ..... Shut down 120 ft.
Mid-Kansas Oil & Gas Co.'s No. 1 Goode, 2,152 ft. from E and 330 ft. from S Sec. 26, Blk. 161, G.C.&S.F. Sur. ..... Shut down 6,120 ft.
Jones et al's No. 1 Pankenham, C SE NW Sec. 43, Blk. B-2, C.C.S.D.&R.G.N.G. Sur. ..... Drlg. 1,300 ft.

TOM GREEN COUNTY

Belding & Dutton's No. 1 Norsworthy, 2,640 ft. from S and 587 ft. from E of John McNeese Sur. ..... Shut down 760 ft.; show oil and gas 725 ft.
Fitzgerald & Taliaferro's No. 1 Bennett, C SW Sec. 1,628, E. H. Dinger Sur. ..... Plugged back to 2,405 ft. to straighten hole; shut down 2,447 ft.
Mintex Oil Co.'s No. 1 Campbell Est., 445 ft. from S and 630 ft. from W of Sec. 180, Dist. No. 11, S.P. Sur. ..... Shut down, 1,994 ft.
Pratt & Hancock's No. 2 Lewis, 100 ft. N and 330 ft. E of most northerly SW cor. of Joshua S. Grant Sur. No. 2 ..... Shut down 200 ft.

UPTON COUNTY

Mintex Oil Co.'s No. 1 Lane, 2,310 ft. from N and 1,650 ft. from W Sec. 36, Blk. 1, M.-K.-T. Sur. ..... Shut down 2,134 ft.
Rankin et al's No. 1 Cordova Union Land, 660 ft. from N and E Sec. 6, G.C.&S.F. Sur., 1¼ miles S of Rankin ..... Location.

VAL VERDE COUNTY

Independent Operators' No. 1 Whitehead, SE SE Sec. 10, Blk. 4, I.&G.N. Sur., elev. 1,175 ft. ..... Shut down 5,420 ft.
O. O. Owens' No. 1 Mills, Sec. 128, Blk. 1, I.&G.N. Sur., elev. 2,130 ft. ..... Shut down 6,780 ft.

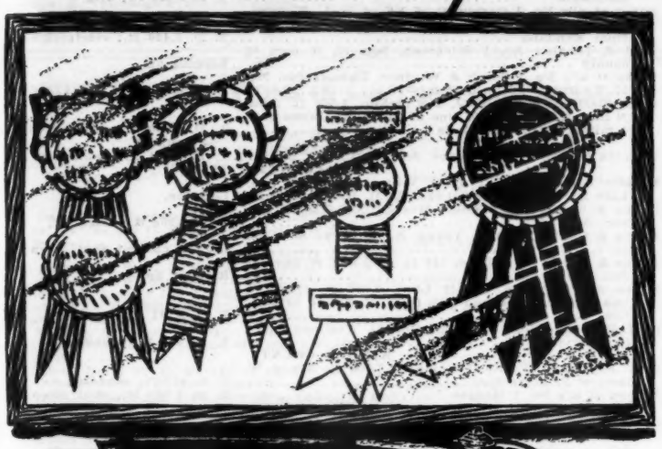
WARD COUNTY

Bradford et al's No. 1 Carson, 990 ft. from NE and SE Sec. 26, Blk. 5, H.&T.C. Sur. ..... Drlg. 2,060 ft.
Bradford & Abell's No. 2 Boogher, 1,140 ft. from NW and 800 ft. from SW, Sec. 11, Blk. 5, H.&T.C. Sur. ..... Rigging up.
Beckley et al's No. 1 Johnson, 4,140 ft. from NE and 990 ft. from SE Sec. 8, Blk. 32, H.&T.C. Sur. ..... Drlg. 1,968 ft.
Buster Black's No. 1 Hall & Roberts, 990 ft. from NE and 1,650 ft. from NW, Sec. 17, Blk. 32, H.&T.C. Sur. ..... Drlg. 1,050 ft.
Clyde Bradford's No. 1 Hardinage & Welsor, 330 ft. from SE and 330 ft. from SW, H.&T.C. Sur. ..... Total depth 2,475 ft.; to run tubing.
Central Oil & Gas Co.'s No. 1 Barrow, 330 ft. from NW and 1,263 ft. from SW, Sec. 55, J. W. Jackson Sur. ..... Spudded and shut down.
Gibson & Johnson's No. 1 Johnson, 4,140 ft. from SE and 990 ft. from NE, Sec. 10, Blk. 32, H.&T.C. Sur. ..... Drlg. 1,665 ft.
Hankinson et al's No. 1 Emery, 3,090 ft. from SE and 510 ft. from SW, Sec. 26, Blk. 5, H.&T.C. Sur. ..... Top salt 840 ft.; drlg. 905 ft.
Magnolia Pet. Co.'s No. 1 Sealy (Atlantic), 2,130 ft. from S and 1,650 ft. from E, Sec. 45, Blk. F, G.M.M.B.&A. Sur. ..... Top salt 2,345 ft.; drlg. 3,120 ft.
Pat Moran's No. 1 Sweatt, 1,470 ft. from SW and 150 ft. from NW Sec. 12, Blk. 5, H.&T.C. Sur. ..... Location.
R. F. Owens' No. 1 Johnson, 100 ft. from NE and 1,100 ft. from SE of Sec. 8, Blk. 33, H.&T.C. Sur. ..... Drlg. 4,803 ft.
Peck et al's No. 1 Merrett, 2,166 ft. from NE and 2,648 ft. from SE, Sec. 11, Blk. 5, H.&T.C. Sur. ..... Drlg. 2,194 ft.; show gas 2,050 ft.
Rector Oil Co.'s No. 1 Smith, 1,320 ft. from N and E, Sec. 22, Blk. A, G.M.M.B.&A. Sur. ..... Rig.
Shipley et al's No. 5 Hayzlett, 2,490 ft. from SE and 1,980 ft. from SW, Sec. 17, Blk. 5, H.&T.C. Sur. ..... Shut down 2,520 ft.; 1,500 ft. oil in hole; waiting on tubing.
Simms Oil Co.'s No. 1 Himmel, 330 ft. from NE and 2,310 ft. from SE, Sec. 30, Blk. B-29, P.S.L. Sur. ..... Top salt 965 ft.; drlg. 2,298 ft.; increase in oil 2,275 ft.
Sturm's No. 1 Jones, 330 ft. from SW and SE of Sec. 25, Blk. B-39, P.S.L. Sur. ..... Elev. 2,519 ft.; drlg. 1,622 ft.
California Co.'s No. 1 Gordon, 330 ft. from NE and SE, Sec. 6, Blk. 34, H.&T.C. Sur. ..... Top pay 2,352 ft.; total depth 2,599 ft.; flowed 91 bbls. in 2 hours; rerunning tubing.
Shipley et al's No. 1 Monroe, 330 ft. SE SW, Sec. 3, Blk. 1 ..... Drlg. by tools 4,355 ft.

WINKLER COUNTY

White et al's No. 1 Owenby, 305 ft. from NE and 1,185 ft. from SE, Sec. 7, Blk. 32, H.&T.C. Sur. ..... Fishing tools 2,035 ft.
Liner Drlg. Co.'s No. 1 Campbell, 350 ft. from N and E cor., Sec. 2, Blk. B-5 ..... Shut down 4,640 ft.

Consistently Good Performance



Nothing less could win the preference given Armstrong steam traps by the oil industry

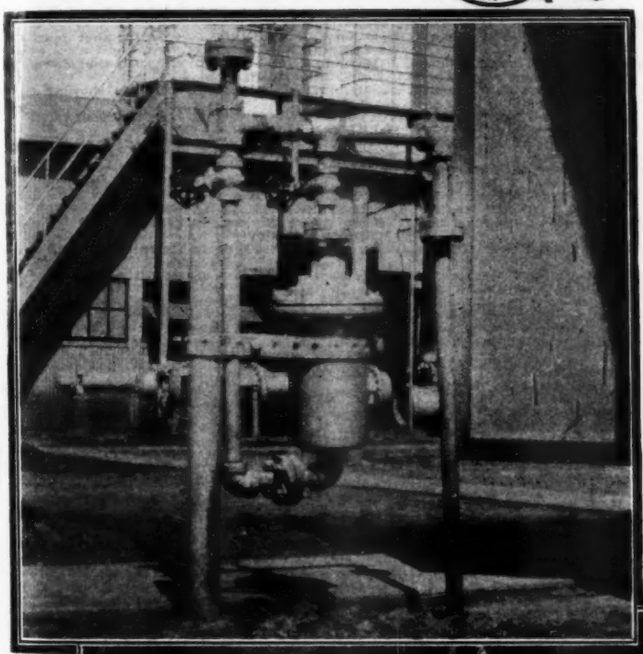
The Armstrong trap shown below is draining an outside steam line at a refinery of one of the world's largest oil companies.

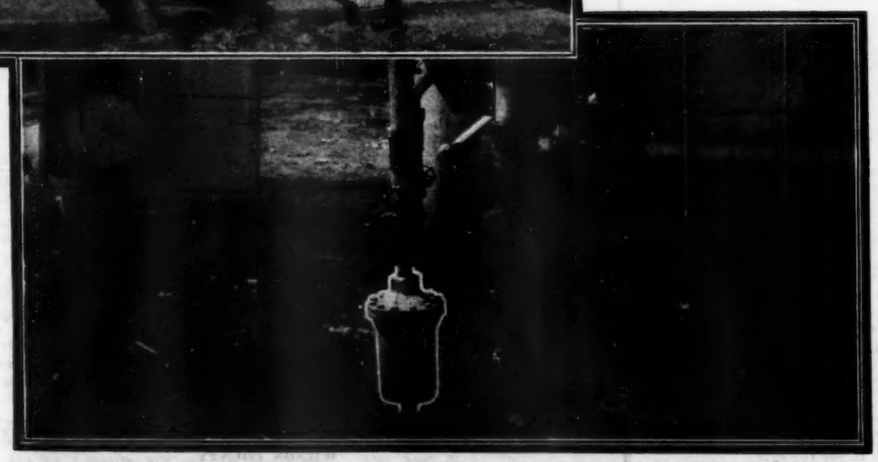
THOUSANDS of Armstrong Inverted-Bucket steam and gasoline traps play a part in the refining and processing of a substantial part of the world's oil production. This is the soundest possible evidence of their ability to meet the trapping requirements of an industry which demands the utmost from its operating equipment.

That Armstrong popularity (more of them are in use than any other mechanically operated trap) should extend to oil refineries is readily explained. For oil company engineers are quick to appreciate the advantages of steam or gasoline traps which cannot air-bind .... do not clog on scum or sediment, because they are self-scrubbing .... are small enough to be supported by connecting pipes .... have greater capacity than most traps of larger size .... are free from wire-drawing and valve scoring .... are made and guaranteed by a company that has specialized on traps alone for 20 years .... are serviced by a nation-wide organization.

Armstrong traps are supplied for steam pressures from 1 to 1350 lbs. and any degree of superheat; for gasoline service at pressures up to 1500 lbs. and more.

Because of the consistent performance of Armstrong traps in the oil industry, we are glad to have you test them out, without cost, for 90 days in your own plant. Return the traps collect after the trial period. Write for as many traps as desired giving pipe sizes, services, etc.





An Armstrong steam trap on a gasoline plant still at the Knox & Eason refinery, Earlsboro, Okla.

Armstrong Machine Works

868 Maple Street, Three Rivers, Michigan

Stocks in All Principal Cities

OGJ 6-28 Gray

SOUTHWEST TEXAS PROVEN AREAS

(Continued from Page 32)

United Prod. Co.'s No. 37 Ray, 3,200 ft. from SW line, 996 ft. from SE line of Willis A. Moore Sur. ..... T. D. 1,588 ft.; drlg.
United Prod. Co.'s No. 38 Ray, 900 ft. E, 10° S of No. 35 Ray ..... T. D. 3,974 ft.; tested salt water.

CARTWRIGHT POOL—LIVE OAK COUNTY

Houston Oil Co.'s No. 3 Dunning, M. B. Kilvin Sur. ..... Location abnd.
Houston Oil Co.'s No. 32 Cartwright, 691 ft. N, 30° E of No. 11 ..... T. D. 595 ft.; drlg.

CHITTIM POOL—MAVERICK COUNTY

Texas Gas Utilities' No. 8 Chittim, 24 ft. S of No. 7 Chittim ..... T. D. 1,650 ft.; drlg.

AGUA DULCE FIELD—NUECES COUNTY

Houston Oil Co.'s No. 1-B Ollie Purl ..... T. D. 4,848 ft.; comp. 25,000,000 ft. gas.

SAXET FIELD—NUECES COUNTY

Gulf Coast Oil Co.'s No. 1 Maggie Harrall, 330 ft. from S and W lines of Blk. 32, Sec. 311 ..... T. D. 4,010 ft.; drlg.
Houston Oil Co.'s (Andy Bowen) No. 1 Prieur, H. B. Sheppard Sur. ..... T. D. 1,465 ft.; waiting for csg.
Houston Oil Co.'s No. 1 Lawrence ..... T. D. 3,000 ft.; running wild.
Houston Oil Co.'s No. 2 Rand Morgan ..... T. D. 4,095 ft.; rigging up to deepen.
W. L. Pearson Properties' No. 1 Dunn, 300 ft. S of Bay.. Dropped till work is resumed.
L. L. Smith's No. 1 Hunter, 150 ft. from S and W lines of N half of Hunter tract ..... T. D. 3,416 ft.; drlg.
Saxet Oil Co.'s No. 2 Dunn, 1,000 ft. N, 500 ft. W of No. 7 Dunn ..... T. D. 4,210 ft.; drlg.

WHITE POINT FIELD—SAN PATRICIO COUNTY

Saxet Oil Co.'s No. 4 White Point ..... T. D. 5,020 ft.; drlg.

PRYOR FIELD—ZAVALA COUNTY

Texas Gas Utilities' No. 4 Pryor, 1,000 ft. NW of No. 3 Pryor ..... Location.

LAREDO DISTRICT
KOHLER POOL—DUVAL COUNTY

Humble Oil & Refining Co.'s No. 50 Kohler, 2,805 ft. from S line, 165 ft. from W line of Sur. 164 ..... T. D. 6,100 ft.; drlg.; tested salt water 6,020 ft.

COLE COUNTY—DUVAL COUNTY

Magnolia Pet. Co.'s No. 1 W. Benavides, 330 ft. from N and W lines, Sur. 172 ..... Drlg. 2,270 ft.

JENNINGS-MUCKELROY POOL—ZAPATA COUNTY

Allied Oil & Gas Co. and Allen & Morris' No. 15 Guitierres, 2,317 ft. NE line, 200 ft. SE line of Share 4, Fansler Partition, Comitas grant ..... T. D. 1,481 ft.; testing.
E. C. Brogan's No. 1 Montemeyor, Blk. 11, Sur. 84 ..... T. D. 2,900 ft.; abnd.
E. C. Brogan's No. 2 Montemayor, 450 ft. from N line, 150 ft. from W line of Blk. 11, Sur. 64 ..... Location.
O. W. Killam's No. 8 Bustamente, 715 ft. SE line, 622 ft. SW line, Blk. 7, Share 5, Fansler's Partition, Comitas grant ..... Set csg. 1,253 ft.; waiting on cement.
Trevino Oil Corp.'s No. 9 I. G. Trevino, Sur. 412 ..... T. D. 1,200 ft.; drlg.

CUELLAR POOL—ZAPATA COUNTY

O. W. Killam's No. 49-C Cuellar, Sur. No. 278 ..... Location abnd.

WILDCAT OPERATIONS IN SOUTHWEST TEXAS

(Continued from Page 32)

BEE COUNTY

Alexander et al's No. 1 McFall, 3 miles S Skidmore .... T. D. 1,206 ft.; reaming.
Grebin & Woods' No. 1 Riggs, 4,800 ft. to E line, 200 ft. to N line of James Nowland Sur., 6 miles W of Skidmore ..... Rigging up.
Mauldin et al's No. 1 Kimball, 300 ft. S Grayburg's No. 1-A Kimball, S. Winship Sur. ..... T. D. 3,544 ft.; standing.

BEXAR COUNTY

Ingersoll-Miller's No. 1 E. B. Carruth in Francisco Rotan Sur. ..... T. D. 480 ft.; drlg.
John F. Camp.'s No. 1 Cheves, 12 miles S of San Antonio ..... T. D. 1,770 ft.; drlg.
J. M. Russell's No. 1 F. L. Price, 1,500 ft. to N line, 660 ft. W of tract in Angel Navarro Sur. ..... T. D. 1,172 ft.; drlg.
Schneider, Rees et al's No. 2 Claussen, 12 miles NE of San Antonio ..... T. D. 702 ft.; shut down.

CALDWELL COUNTY

Mills et al's No. 1 McMahon, 275 ft. SW line, 75 ft. SE line of tract, J. Pinchback Sur. ..... T. D. 2,356 ft.; drlg.
M. O. Rayor's No. 1 Dunlap, 150 ft. NW and NE lines of farm, Solomon Seal Sur. ..... T. D. 139 ft.; drlg.; first hole lost.
R. R. Ogden's No. 1 O. S. Alexander, 1,300 ft. from N line, 150 ft. from E line of S. Spiller Sur. ..... T. D. 2,179 ft.; drlg.

COMAL COUNTY

Caldwell & Lanier's No. 1 T. J. Byler, 175 varas from W line, 370 varas from N line of 320-ac. tract in the H.E.&W.T. No. 5,894 Sur. ..... T. D. 698 ft.; shut down.

DEWITT COUNTY

Gibson & Sturm's No. 1 Clark, Dolores Alderete Sur. .... Rigging up.

DUVAL COUNTY

Coffee et al's No. 1 Jose Garza, center Sur. 49 ..... T. D. 900 ft.; standing.
Magnolia Pet. Co.'s No. 1 W. Benavides, 330 ft. N and W lines of Sur. No. 172 ..... T. D. 2,270 ft.; coring.
O'Byrne et al's No. 1 Well, B.S.&F. Sur. No. 568 ..... T. D. 1,830 ft.; repairing boiler.
S. J. Carpenter et al's No. 1 Juan Benavides, Blk. 33, Mesquite grant ..... T. D. 1,669 ft.; bailing.

FAYETTE COUNTY

Elam & Reynolds' No. 1 Florence, M. Muldoon Sur. No. 13 ..... T. D. 2,200 ft.; shut down.

FRIO COUNTY

A. H. Wray's No. 1 Burns estate, 700 ft. N, 330 ft. E of C Sec. 123, Antone Hupzor ..... T. D. 3,716 ft.; abnd.

GOLIAD COUNTY

Gibson Oil Co.'s No. 1 Cyrus Parks, 3,000 ft. S and 2,500 ft. E of NW cor. of Parks ranch, Ferguson Sur. ..... T. D. 4,380 ft.; abnd.

GUADALUPE COUNTY

Harry J. Bruner's No. 1 Jim Sherrill, 150 ft. N line, 1,360 ft. W line of tract, George Allen League ..... T. D. 575 ft.; drlg.
McGarrity et al's No. 1 A. Wesch, Jr., 150 ft. to N and E lines of farm, H. M. Thompson Sur. ..... T. D. 807 ft.; drlg.
Schleyer, Atherton and Armstrong's No. 1 Ogletree, Robert Smith Sur. ..... T. D. 1,485 ft.; drlg.
Linne et al's No. 1 J. E. Linne, center 263-ac. tract in V. Cortario Sur. ..... Moving in tools.
San Antonio Oil & Royalty Co.'s No. 1 Dibrell, 150 ft. from N and W lines of Sec. 6, H.&T.C.R.R. Sur. .... Location.
W. J. Walton's No. 1 Zoboroski, 700 ft. to W line of tract, 500 ft. S of Guadalupe River, in Joseph D. Clements Sur. ..... T. D. 50 ft.; set surface csg.; waiting on cement.

HAYS COUNTY

J. C. Jones et al's No. 1 Byder, John Ingram Sur. ..... T. D. 900 ft.; drlg.

JIM HOGG COUNTY

Magnolia Pet. Co.'s No. 1 Cuellar, Sur. No. 575 ..... T. D. 4,212 ft.; drlg.
Peterman & Minahan's No. 1 Palacios, Sur. No. 231 .... T. D. 1,360 ft.; shut down.
D. C. DeWitt's No. 1 Teofilo Gomez, 1,170 ft. from N line, 150 ft. from W line of Sur. 12 ..... T. D. 200 ft.; shut down.

JIM WELLS COUNTY

Carsil Oil & Gas Co.'s No. 2 McGill, 900 ft. due N of No. 1 in D. Baldwin Sur. ..... T. D. 3,004 ft.; abnd.
Gulf Production Co.'s No. 4 Schaeffer ..... Location.
Prairie Lee Prod. Co.'s No. 1 Oppenheimer ..... T. D. 1,000 ft.; shut down; waiting for heavier rig.
Smith Clark Co.'s No. 1 Cuero Cattle Co. ..... Dropped till work is resumed.

KENDALL COUNTY

Borgett et al's No. 1 Hagg, W. Avery Sur. ..... T. D. 1,165 ft.; shut down.
Dixon Oil Co.'s No. 1 Ottmar Behr, 823 ft. from S and N lines of Jessie Wilson Sur., 3 miles S of Sisterdale ..... T. D. 2,615 ft.; drlg.
Sitton et al's No. 1 Garvin, C of NE of D. L. Richardson Sur., in the D. L. Richardson Sur., 1 mile NE from Kendalia ..... T. D. 1,420 ft.; sidetracking.
Fred S. Dibble's No. 1 Ellebrach, Sur. 77, N part of county ..... Rigging up.
Hicks et al's No. 1 Speck & Wiedner, Thomas Sur. No. 27, 2 miles S of Twin Sisters ..... Location.
P. B. Sterling's No. 1 E. J. McCrocklin, 1,350 ft. from N line, 250 ft. from W line of the B. G. Owens Sur., 4 miles W from Kendalia ..... T. D. 1,600 ft.; dropped till work is resumed.
Permian Oil Co.'s No. 1 Taylor, Sec. 18, G.B.&G. Sur. .... T. D. 1,814 ft.; fishing for bit.

KERR COUNTY

Herbert Oil Co.'s No. 1 J. D. Witt, 1,320 ft. N line, 1,320 ft. W line of Sec. 1,923, W. H. Hamilton Sur.... Location.
Evans & Gant's No. 1 Selker-Mears, C.C.S.D.&R.G.N.G. Sur. No. 1,695 ..... T. D. 1,900 ft.; drlg.
Evans & Gant's No. 1 E. Young, A. E. Burge Sur. No. 28 ..... Rigged up and shut down.
Evans & Gant's No. 2 Love, 150 ft. to S and W lines of Sur. 1,593 ..... Rigging up.
Evans & Gant's No. 1 Jeff Love, 1,320 ft. from W line of Sur. 1,594 and 660 ft. S of S line of Sur. 1,597 ..... T. D. 3,391 ft.; to deepen.
B. M. Hatfield's No. 1 Westland, Blk. 23, Westland Subd. to Kerrville ..... T. D. 460 ft.; standing.

KIMBLE COUNTY

C. L. Bryant et al's No. 1 Lambert, 7,700 ft. N and W lines of F. Lotta Sur. ..... T. D. 850 ft.; standing.
Kamon et al's No. 1 Hodges ..... T. D. 2,910 ft.; shut down.

KINNEY COUNTY

C. R. Cox et al's No. 1 Rose, 1,344 varas from NW line, 100 varas from SW line of A. B. Harper Sur. ..... Location.

LASALLE COUNTY

Fred W. Vales' No. 1 Coleman, 200 ft. from S and E lines of SW Sec. 514, B.S.&F. Sur. ..... T. D. 40 ft.; standing.

LAVACA COUNTY

F. P. Zoch's No. 1 Dobard, 950 ft. from N line, 150 ft. from W line of T. G. Western Sur. ..... Moving in rig.

LIVE OAK COUNTY

Burke-Greis Oil Co.'s No. 1 West Ranch, James Vaughan Sur. ..... T. D. 1,774 ft.; set surface csg.
Illinois Exploration Synd.'s No. 1 Reeves-Brown, 1,300 ft. S of Seliers tract, 1,800 ft. E of Ry. ..... T. D. 2,145 ft.; standing.
Sid Keoughan's No. 1 C. E. Terrell, 600 ft. from N line, 1,900 ft. from E line, Dan O'Boyle Sur. ..... T. D. 2,840 ft.; shut down.

LEE COUNTY

Burt et al's No. 1 R. C. Saunders, J. Maxmilian Sur. .... T. D. 3,500 ft.; shut down.
A. H. Wheeler and associates' No. 1 fee, Blk. 47, H. Donohue Sur. ..... T. D. 3,200 ft.; showing oil; will set csg.
C. B. Polk et al's No. 1 Stoltz, Hiram Donohue Sur. .... T. D. 1,758 ft.; fishing.

McLENNAN COUNTY

C. E. Groone et al's No. 1 League ..... T. D. 1,230 ft.; shut down.

McMULLEN COUNTY

Belt Pet., Inc.'s No. 1 Martin, 150 ft. NW line, 150 ft. to SW line of E. Melon No. 212 Sur. ..... T. D. 28 ft.; standing.
Camp and Stanolind's No. 1 Murphy, 1,845 ft. from W line, 165 ft. from N line, Sur. 123 ..... Drlg. water well.
Whall, Scherer et al's No. 1 Shiner, Henry Brewer Sur... T. D. 1,630 ft.; drlg.

MEDINA COUNTY

Donaldson Oil & Gas Co.'s No. 2 Adams ..... T. D. 130 ft.; dropped till work is resumed.
J. H. Hickey's No. 1 Jungman, at N end Chicon Lake .... T. D. 425 ft.; drlg.
Sunflower Oil Co.'s No. 1 Mofield, J. Brothag Sur. No. 532 ..... T. D. 1,940 ft.; drlg.
F. E. Tegler's No. 1 J. P. Nixon, 600 ft. from W line, 584 ft. from N line of tract, near Ina Field ..... Location.
Yancey Development Co.'s No. 1 Fansler, Sur. No. 801 .... T. D. 1,550 ft.; drlg.

MILAM COUNTY

Dil-Tex Oil Corp.'s No. 1 Dilbeck, 450 ft. N and E lines of farm, Fernando Rodriguez Sur. ..... T. D. 1,900 ft.; drlg.
H. Elliott's No. 1 Kirkman, 150 ft. from NE lines of farm in M. Park Sur., NW from Gabriel ..... T. D. 1,361 ft.; shut down.
Rheubotham & Tate's No. 1 Johnson, 325 ft. from N line, 250 ft. from W line of 40-ac. tract, D. Robinson Sur. ..... T. D. 2,192 ft.; drlg.
Red Bank Oil Co.'s No. 1 Foster, A. G. Berry Sur. ..... Derrick blown down.
McMasters and Pomeroy's No. 1 Pluger, J. J. Acosta Sur... T. D. 1,606 ft.; shut down.
J. E. McKee et al's No. 1 Littleton, 150 ft. from N and 225 ft. from W line of lease, C. Chevalier Sur. .... T. D. 510 ft.; shut down.
Peggie Brothers' No. 1 M. Reed ..... T. D. 1,290 ft.; shut down.

REAL COUNTY

McGinley Corp.'s No. 1 Haby, C of SW Sec. 175 ..... T. D. 1,700 ft.; drlg.
Gant-Kilgore and Evans' No. 1 A. D. Auld, C.C.S.D.& R.G.N.G. Sur. No. 23 ..... T. D. 3,310 ft.; set new string csg

STARR COUNTY

B. B. Tips' No. 1 F. Dayno, Lot 1, Porcion No. 81 ..... T. D. 332 ft.; standing.
Menyard et al's No. 1 Sealbury, 150 ft. from E line, 6,550 ft. from N line, Share 5, Porcion 75, Jurisdiction of Carmargo ..... T. D. 411 ft.; tested dry.
Los Olmos Oil Co.'s No. 4 Kelsey-Bass, 2,208 ft. from W line, 60 ft. from N line, Blk. 7, Subd. Porcions 75, 76 and 77, Jurisdiction of Carmargo ..... T. D. 410 ft.; set csg.

SAN PATRICIO COUNTY

George B. Pickett's No. 1 Baldwin, 900 varas due E of Denton, 1,200 ft. S of the SE cor. of O'Neill Sur., Abstract 211 ..... T. D. 4,020 ft.; dropped till work is resumed.
Saxet Oil Co.'s No. 1 Carroll, 8 miles N of Gregory ..... Dropped till work is resumed.

TRAVIS COUNTY

Fort Bend Oil Co.'s No. 1 Engleman, 450 ft. N line, 150 ft. W line of 108-ac. tract, J. H. Denson Sur. .... T. D. 2,087 ft.; abnd.
F. W. Fuchs' No. 1 Ballersted, A. Alexander Sur. ..... Derrick.
Franklin et al's No. 1 Wilson, A. Alexander Sur. ..... Derrick.
Marts et al's No. 1 Oswald ..... T. D. 1,406 ft.; abnd.
Ratcliffe et al's No. 1 Jim Jones, 1,000 ft. S line, 750 ft. E line of farm in Amos Alexander Sur. ..... T. D. 305 ft.; drlg.
Waldron et al's No. 1 Cook, D. H. Minor Sur., 8 miles SW of Austin ..... T. D. 645 ft.; drlg. shale.
Taylor Temple Oil Co.'s No. 1 Smith, L. Kimbro Sur. .... T. D. 850 ft.; abnd.
Bohls & Wilson's No. 1 Norton, J. Cole Sur. ..... Abandoned.

WEBB COUNTY

Cole Pet. Co.'s No. 4 Benavides, Sur. No. 1,601 ..... T. D. 1,900 ft.; drlg. gumbo.
Eugene Garner, Jr.'s No. 1 Billings, 411 ft. E line, 956 ft. N line of NW NE, Sur. 71 ..... Location.

WILLIAMSON COUNTY

Fritz Fuchs' No. 1 L. W. Fuchs, Cartwright Sur. ..... T. D. 2,231 ft.; abnd.; dry.
Wilburn et al's No. 1 Caroline Hurts, P. Coursey Sur. .... T. D. 1,327 ft.; shut down.
Wilson et al's No. 1 Walker ..... T. D. 2,260 ft.; shut down.

WILSON COUNTY

A. M. Blume's No. 1 Nickolson, C. Diaz Sur. ..... T. D. 460 ft.; drlg.

ZAPATA COUNTY

T. H. Ward's No. 1 Uribe, 150 ft. NW line, 150 ft. SW line, Blk. 8 Subd., Share 7, Partition No. 6, T. Uribe Partition of Jose V. Borrego Sur. ..... Rigged up and standing.
Benson Oil Co.'s No. 1 S. Vela, W cor. of Blk. 12, Sur. No. 259 ..... T. D. 2,325 ft.; drlg.
Bill Henry et al's No. 1 Gopher Trust estate, Borrego grant ..... T. D. 1,398 ft.; drlg.

Penny Prod. Co.'s No. 1 Juan V. Cuellar, Jr., et al, 175 ft. NE line, 175 ft. SE line Poppas Subd., Porcion 33 and 34, Blk. 1, Sur. 2 ..... T. D. 2,035 ft.; drlg.
National Oil Co.'s No. 1 Zapata Trust Estate, 617 ft. Porcion 6 ..... T. D. 690 ft.; drlg.
NW line, 96 ft. NE line, Blk. 97, De Prom Subd.,
National Oil Co.'s No. 2 Adams, 150 ft. from NW line and SW line, Blk. 11, Borrego grant ..... T. D. 1,320 ft.; drlg.
Mackenzie & Talmadge's No. 1 Trevino, 400 ft. SE line, 200 ft. NE line, Blk. 6, Sur. No. 4, Porcion 2 and 3 ..... T. D. 520 ft.; standing.

WILDCAT OPERATIONS IN LOUISIANA-ARKANSAS

(Continued from Page 30)

CLAIBORNE PARISH

Leue Oil Co.'s No. 1 Kinder, 154 ft. N, 642 ft. E, SW cor. SE, Sec. 2-21-7 ..... Began May 16; set 12½-in. 152 ft; drlg. 250 ft.

CONCORDIA PARISH

United Gas Public Service Co.'s No. 1 Hughes, 660 ft. S, 45° 30" E, 660 ft. N 60° 30" E of NW cor., Sec. 49-8-10 ..... Arranging to test 1,482 ft.

DE SOTO PARISH

Dupree-Fountain's No. 1 J. M. Nabors, 250 ft. S, 250 ft. W, NE cor. NW, Sec. 5-13-11 ..... S.D. 2,425 ft.
Keatchie O. & G. Co.'s No. 1 Hallie Smith (was H. E. Weichert's) NE SE, Sec. 31-14-15 ..... S.D. 2,350 ft.
C. D. Neff et al's No. 1 Ramsey, 1,000 ft. W, 400 ft. S, NE cor. SE, Sec. 33-13-16 ..... S.D; W.O.; bit in hole 3,000 ft.
Ben Merritt, tr.'s No. 1 Walluma, NE cor. SW SW, Sec. 29-12-13 ..... Drlg. gumbo 1,809 ft.
E. T. Oakes' No. 1 R. H. Bryant et al, 200 ft. N and W, SE cor. NE NW, Sec. 30-13-15 ..... Set 10-in. 80 ft; drlg. 800 ft.
Rellitt Oil Co., Inc.'s No. 1 Gannon Hrs., 300 ft. S and E, NW cor. NW NE, Sec. 12-11-16 ..... Rigging up.

NATCHITOCHES PARISH

W. M. Coats' No. 1 Collins, 730 ft. N, 50 ft. E, C, Sec. 28-9-10 ..... T.A. 4,091 ft.
J. W. Cooper et al's No. 1 Cooper, NW SW, Sec. 35-11-10. S.D. 3,156 ft.
Cooper et al's No. 2-A Cooper, C SE SE, Sec. 32-11-10.. S.D. 1,518 ft.
C. M. Talley et al's No. 1 C. M. Talley, 1,980 ft. W, 660 ft. S, NE cor. SE, Sec. 29-11-10 ..... Tested dry; S.D. 1,380 ft.

RED RIVER PARISH

La. Oil & Dev. Co.'s No. 2 La. Delta Pecan Co., 2,950 ft. S, 300 ft. E, NW cor., Sec. 27-13-11 ..... Spudded in; S.D. 50 ft.
Lucky Strike Oil Co.'s No. 1 Chaffraix, 200 ft. S, 200 ft. E, C, Sec. 32-12-10 ..... Junked and abd. 3,010 ft.
Mack Jourden Co.'s No. 1 Lockett, 4,035 ft. S, 1,080 ft. E, NW cor. SW, Sec. 29, in Sec. 32-13-10 ..... Began May 15; set 10-in. 90 ft; drlg. 300 ft.

RICHLAND PARISH

Alto Gas Co.'s No. 2 Hunt, 660 ft. S and E, NW cor., Sec. 13-17-5 ..... Derrick.
Southern Carbon Co.'s No. 2 Rosengraut & Ducomb, 1,980 ft. N, 660 ft. E, SW cor., Sec. 19-17-6 ..... Began May 7; set 12-in. 177 ft; 8-in. 933 ft; drlg. 1,533 ft.
Southern Carbon Co.'s No. 3 Rosengraut & Ducomb, 660 ft. S and E, NW cor., Sec. 30-17-6 ..... Began May 13; set 12-in. 178 ft; 8-in. 915 ft.
Southern Carbon Co.'s No. 1-B C. M. Noble, 2,966 ft. N, 1,525 ft. W, cor. Secs. 7, 8, 17 and 18, in Sec. 37-15-6. Location.
United Gas Public Service Corp.'s No. 4 Earle, SE cor., Sec. 1-16-5e ..... W.O.C. 2,465 ft.

SABINE PARISH

Durham Oil Co.'s No. 1 Polly (was Davis et al's), NE cor. NE NE, Sec. 18-8-12 (was Stacy et al's)..... S.D. 2,722 ft.
Diffie & Barnett's No. 1 Lites (was J. W. Clark's), 330 ft. N, 330 ft. W, SE cor. SW NW, Sec. 34-8-11..... S.D. 105 ft.
R. L. Gay, tr.'s No. 1-A Long Bell Lbr. Co., 430 ft. S, 200 ft. W, NE cor. NW NW, Sec. 10-8-13..... Drlg. broken sand 2,683 ft.
Lacey Prod. Co.'s No. 1 Cooper, 330 ft. N, 330 ft. W, SE cor. SW NW, Sec. 30-8-11..... W.O.S.R; T.D. 2,620 ft.
Jean Longoria's No. 1 Belton (no check), Sec. 31-9-13.. Cored sand, S.O. 1,600 ft; set 8-in. csg.
H. W. Perritt's No. 4 Bowman-Hicks, SE cor. SE NE, Sec. 2-7-12 ..... Rigging up.
H. W. Perritt's No. 1 Boring, NW cor. NW NW, Sec. 11-7-12 ..... 2,000 ft. oil in hole 2,602 ft.
Sabine Royalties Co.'s No. 1 Skinner, SW NW, Sec. 5-8-11. Arranging to set 6⅝-in. 2,253 ft.
Stovall Drlg. Co.'s No. 1 Nulton, SE cor. NW NE, Sec. 1-7-13 ..... Drlg. 1,320 ft.
A. H. Thames' No. 1 Edward est., 150 ft. NW SE cor. NE SE, Sec. 8-8-13 ..... S.D. for wtr. 1,200 ft.
John Woodley's No. 1 Sabine Lbr. Co., 400 ft. S, 330 ft. W, NE cor. SE, Sec. 12-8-12 ..... Tested dry 2,716 ft; W.O.

TENSAS PARISH

A. R. Willis et al's No. 1 Currey, 1,320 ft. S, 1,320 ft. E, NW cor., Sec. 39-11-13 ..... S.D. for fuel 3,510 ft.

UNION PARISH

Nemours Corp.'s No. 1 McGaugh, 770 ft. N, 651 ft. E, SW NW, Sec. 24-22-3 ..... Set 8-in. 770 ft; 6-in. 2,080 ft.

WEBSTER PARISH

Coyle, tr.'s No. 1 Fraser, 200 ft. N, 200 ft. E, SW cor. NE SE Sec. 27-23-11 ..... Derrick.
Red Hawk Oil Co.'s No. 1 Mathews, 330 ft. N, 330 ft. E, C, Sec. 11-23-9 ..... Junked and abd. 2,797 ft.

WEST CARROLL PARISH

United Gas Public Service Co.'s No. 1 Pioneer Cooperage, 663 ft. E, 3,954 ft. S, NW cor., Sec. 29-21-9..... Drlg. shale 2,280 ft.

ARKANSAS

CHICOT COUNTY

R. R. Smith's No. 1 Lytle, 660 ft. N, 660 ft. E, C, Sec. 21-23-3 ..... T.A. 2,925 ft.

COLUMBIA COUNTY

Joe Modisette et al's No. 1 Sharklee, C SW NE, Sec. 33-16-19 ..... Arranging to set 8¼-in. 965 ft.
Kendall Oil Co.'s No. 1 Fullenweider, Rhea & Kitchen Sec. 13-17-22 ..... S.D. 778 ft.

CLAY COUNTY

R. C. Jeffus' No. 1 Underwood, 510 ft. N, 350 ft. W, C NW SE, Sec. 4-20-8 ..... S.D; clearing titles 1,214 ft.

CLEBURNE COUNTY
(Cable tools)

Donnelly-Craver et al's No. 1 Donophan Lbr. Co., SE cor. NW, Sec. 33-11-9 ..... S.D. 3740 ft.

DALLAS COUNTY

E. C. Brewer's No. 1 W. E. Hillman, 330 ft. E, 40 ft. S, NW cor. SE NE, Sec. 20-10-13 ..... S.D; W.O. 2,846 ft.
J. H. James, tr.'s No. 1 Fordyce Lbr. Co., 200 ft. S, 200 ft. E, NW cor. NW NE, Sec. 11-9-15..... S.D. changing D.S. 2,520 ft.

GRANT COUNTY

Spann & McClung's No. 1 Sarah Page, 660 ft. W, 660 ft. S, NE cor. NW, Sec. 3-3-13 ..... S.D. 1,034 ft.

HOT SPRINGS COUNTY

John Watkins' No. 1 Cunningham (was J. R. Lockhart's), 285 ft. S, 285 ft. W, NE cor., Sec. 11-5-16... S.D. for funds 320 ft.

LAFAYETTE COUNTY

McIver et al's No. 1 Hattie, NW cor. NE, Sec. 1-20-6.... Abd. 2,345 ft.
Smitherman & McDonald's No. 1 Rogers, 330 ft. N and E, SW cor. NW SE, Sec. 17-15-22..... Drlg. black shale 1,360 ft.

LINCOLN COUNTY

Lawrence Cook, tr.'s No. 1 McGhee Planting Co., 420 ft. S, 320 ft. W, NE cor. NE SW, Sec. 5-8-7..... Fishing for D.S. 691 ft.

LITTLE RIVER COUNTY

Roberts Oil Co.'s No. 1 H. J. Russell, 330 ft. E, 330 ft. S, NW cor., Sec. 25-12-29 ..... Location.

LOGAN COUNTY

J. H. Flowers' No. 1 J. H. White, Sec. 13-6-26..... S.D; W.O. 3,570 ft.

MILLER COUNTY

East Texas O. & G. Co.'s No. 1 Harvey, 500 ft. E, 300 ft. S, NW cor., Sec. 2-15-26 ..... T.A. 910 ft.
E. & F. Oil Co.'s No. 1 E. L. Beck, 200 ft. S, 200 ft. E, NW cor. SW, Sec. 36-15-26..... T.A. 2,968 ft.
Fitzwater et al's No. 1 Beck, 200 ft. N, 200 ft. W, SE cor. SW SE, Sec. 33-15-26..... T.A. 92 ft.
J. D. McRae's No. 1 Smith, 150 ft. N, 150 ft. W, SE cor., Sec. 28-15-26..... Derrick.

OUACHITA COUNTY

Copenhaven et al's No. 1 Elliott, Sec. 11-15-17..... Bailed dry 2,210 ft; S.D; W.O.
Boling & McLeon's No. 1 L. D. Nealy, 150 ft. S, 150 ft. W, NE cor. SE SW, Sec. 25-16-15..... S.D. repairing boiler 1,115 ft.

PIKE COUNTY

E. R. Henderson's No. 1 Tilyou, 660 ft. W, 500 ft. S, NE cor. NE SE, Sec. 26-8-14..... T.A. 2,909 ft; (corrected depth).
E. R. Henderson's No. 1 J. L. Lee, 400 ft. S, 350 ft. E, NW cor. SW SE, Sec. 31-8-24..... Drlg. gumbo 367 ft.

POPE COUNTY

Ark.-La. P. L. Co.'s No. 1 Baird, 760 ft. S, 660 ft. E, NW cor., Sec. 11-7-20 ..... Dry and abd. 4,231 ft.

SCOTT COUNTY

Heavener O. & G. Co.'s No. 1 Riser, Sec. 36-4-26..... Fishing for bit; cor. T.D. 1,436 ft.
Waldron O. & G. Co.'s No. 1 White, NE cor. SW NW, Sec. 17-3n-29 ..... S.D; waiting on csg. 1,860 ft.

UNION COUNTY

Chapman & Wilson's No. 1 A. H. Hadley, 330 ft. N, 330 ft. E, SW cor. NE SW, Sec. 3-18-13..... 600 ft. fluid 30% S.W. in hole; T.A. 3,570 ft.
Wilson & Chapman's No. 1 N. Parker, 330 ft. S and W, NE cor. NE SE ..... Set 6⅝-in. 3,554 ft; T.D. 3,565 ft.

VAN BUREN COUNTY

Glenn Kohle et al's No. 1 Scalan, 200 ft. S, 200 ft. W, NE cor. SE NW, Sec. 5-19-13..... T.A. 50 ft.

WASHINGTON COUNTY
(Cable tools)

C. H. Willoughby's No. 1 Jones, Sec. 34-16-30..... S.D. for funds 1,795 ft.
H. H. Taylor et al's No. 1 Runny, C NE SW, Sec. 1-13-29. S.D. 1,700 ft.

YELL COUNTY
(Cable tools)

Tegmeier & Luckett's No. 1 Falcon, Sec. 36-7-21..... S.D. 5,710 ft.

EAST TEXAS

BOWIE COUNTY

Devore & Midfield's No. 1 Roy B. Cooper, 200 ft. S, 200 ft. W of NE cor. R. B. Cooper 115-ac. tr., Wm. Ward Sur. ..... Drlg. 1,950 ft.
Hindeman & Ball's No. 1 Merritt (was Maud-Redwater Oil Co.'s), 175 ft. N, 175 ft. E, SE cor. G. W. Hardidge 100-ac. tr. on Floyd Merritt tr. in Y. S. McKinney Sur. ..... Tested dry; D.S. test 2,316 ft.
Tarkington & Jones' No. 1 W. W. Whybark, 200 ft. S, 200 ft. W of SW cor. J. H. Dyer Sur. ..... Derrick.
Lee Timberlake et al's No. 2 Tidwell, 2,510 ft. N, 655 ft. W, SE cor. T. M. Rice Sur. ..... S.D; W.O. 3,000 ft; shale.

CAMP COUNTY

McDonald Bros.' No. 1 Tillery, 150 ft. E, 450 ft. S, NW cor. 127-ac. tr. in J. H. Murphy Sur. ..... S.D. 3,600 ft.

CASS COUNTY

E. K. Atkinson's No. 1 T. J. Wilson, 1,088 ft. S of N line, 2,376 ft. E of W line of H.R.S., J. R. McFarland Sur. ..... Derrick.
R. G. Baker's No. 1 W. R. Caver, on W. R. Caver 75-ac. tr., John Lick Sur. ..... Drlg. 550 ft.
Davis & Pigg's No. 1 Roy Brian, SW cor. Roy Bryan 88-ac. tr., Albert H. Latimer Sur. ..... S.D. 1,975 ft.
Geo. McKamie's No. 1 R. E. Hall, 150 ft. N, 150 ft. W, SE cor. Hall's 117-ac. tr., H. Buckler Sur. ..... Drlg. 2,250 ft.
C. E. Murdock's No. 1 First National Bank, Evans Watson Sur. ..... Topped Georgetown 3,970 ft.
Olds & Smith's No. 1 Atheny, 3,056 ft. W-E line, 856 ft. S-N line, J. C. Byers Sur. ..... S.D changing boiler; 2,308 ft.
John C. Rogers' No. 1 I. E. Lanier, 573 ft. N, 879 ft. W, SE cor. Lanier 86 ac. in K. E. Welborn Sur. .... S.D. 2,275 ft.
John C. Rogers et al's No. 1 W. Q. Henderson, 3,100 ft. S, 3,100 ft. E, NW cor., Wm. Davis Sur. ..... S.D. 955 ft.

HARRISON COUNTY

Wm. H. Atkinson's No. 1 O. D. Hays, 900 ft. E, 150 ft. S, NW cor. O. D. Hays' 46-ac. tr., J. H. Chaffin Sur.. Drlg. 1,170 ft.
Ben Banner's No. 1 J. C. Lowery, in center of J. C. Lowery 81-ac. tr., W. D. Stanfield Sur. ..... Set 6-in. 2,797 ft; arranging to test 2,804 ft.
Everett Prod. Co.'s No. 1 R. L. Gypert, 1,320 ft. W of NE cor., 150 ft. at right angles from NE cor. of E. M. Wilder Sur. in Richard Hooper Sur. ..... Rigging up.
Gholson et al's No. 1 Bivins Farm Co., on J. K. Bivins, Jr.'s 320-ac. tr., Thos. Toby Sur. ..... Rigging up.
O. O. Olford et al's No. 1 R. W. Bolding, 330 ft. E of SE cor. J. B. Cullen's 161-ac. tr., 300 ft. N of N line of Mrs. C. L. Brown's 20-ac. tr., W. W. O. Stanfield Sur. ..... Drlg. 850 ft.
Geo. L. Pace et al's No. 1 T. G. and Eugene Barker, 710 ft. N of S line, 1,930 ft. W of E line, SE cor. 230-ac. tr., Victor Pedraso Sur. ..... Drlg. 3,692 ft.
O. H. Parkening's No. 1 T. J. Taylor, C, Blk. 32, W. H. Payne Sur. ..... Drlg. 1,052 ft.
O. H. Parkening's No. 2 T. J. Taylor, C, J. C. Hawley Sur. ..... Derrick.
Rowan & Nichols' No. 1 Bussey est., center of Bussey 125-ac. tr., E. H. Merchant Sur. ..... Derrick.
Ryan Consolidated Pet. Corp.'s No. 1 Dr. H. H. Key, 1,500 varas N of SE line, 500 varas E of SW line, of E. Carroll Sur. ..... Rigging up.
Seigel Bros. and Kelinson's No. 1 Taylor (no check), F. O'Neil Sur. ..... Derrick.
Thomas & Kinsey's No. 1 J. R. Watson, Thos. Iden Sur. . Derrick.

MARION COUNTY

Gist, Claunch & Dodson's No. 1 Miller, 1,470 ft. E line, 725 ft. N line, SW cor. H. Fulgran H.R. Sur. ..... Rigging up.
Geo. Hindman et al's No. 1 F. V. Lindsey, 2,500 ft. S, most northerly N line, 3,555 ft. E most easterly W line, Alexander Albright Sur. ..... Drlg. 2,602 ft.
Hindeman & Rhondo's No. 1 McGaughey, 1,547 ft. W, most northerly SW cor., 1,638 ft. N most northerly S line, W. J. Willis Sur. ..... S.D. 3,025 ft.
P. E. Hussey's No. 1 A. A. Trammell, Chas. Lockhart Sur. ..... S.D. 1,884 ft.
Shelton et al's No. 1 J. M. McNeal, 800 ft. S, 400 ft. W, NE cor. McNeal's 721-ac. tr., R. Fowler Sur. .... Began May 13; set 12½-in. 212 ft; drlg. 650 ft.

PANOLA COUNTY

Everette Drlg. Co.'s No. 1 E. L. McDaniels, 200 ft. S, 200 ft. W, NE cor. McDaniels' 116 ac., Alanson Barr Sur. ..... S.G. 1,315 ft; arranging to test.
Moses & Wallace's No. 1 Daniel, 660 ft. N and W lines, Mrs. Gerrell 100-ac. tr., SW cor. Isabel Hanks Sur... Derrick.
The Texas Co.'s No. 2 G. W. Brumble, 400 ft. S, 200 ft. E, NW cor., Jno. Womack Sur. ..... Tested 1,000,000 ft. gas 4,742 ft; arranging to deepen.

RED RIVER COUNTY

D. M. Buffington's No. 1 Hossler, E. Hughhart Sur. .... S.D. 2,795 ft.
Johnson Pet. Co.'s No. 1 Randolph, Edw. Dean Sur. .... S.D. 2,280 ft.

SHELBY COUNTY

I. M. Bradley's No. 1 Ashberry (no check), G. W. Mitchell Sur. ..... Drlg. hard chalk 2,130 ft.
E. L. Chapman's No. 1 Pickering Lbr. Co., C. E. Henry (headright) ..... Drlg. lime 3,240 ft.
Chapperell Oil Co.'s No. 2 Holt, Matthew Moore Sur. .. S.D. 3,111 ft.
H. H. Gracey's No. 1 J. A. Morrison, 1,500 ft. N, 200 ft. E, SW cor. J. A. Morris' 109-ac. tr., Wm. English Sur. ..... Drlg. 550 ft.

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Joiner et al's No. 1 Foster & Billingsly, 150 ft. W of CEL Foster & Billingsly's 109-ac. tr., J. Bowlin Sur. — Derrick.
T. A. Martin's No. 1 J. B. Bush, S 3° E, 2,000 ft. from NW cor. J. B. Bush's 77-ac. tr., thence E at right angles to said line 200 ft., Alfred Lindsey Sur. — Moving in rig.
Henry Maulding's No. 1 Frost Lbr. Co., NE cor. Frost Lbr. Co.'s 80-ac. tr., A. D. Fountain Sur. — Changing rigs 1,619 ft.
Schultz et al's No. 1 Hughes, 150 ft. SW cor. Hughes' 110-ac. tr., J. Clay Sur. — Set 10-in. 178 ft; drlg. 1,500 ft.
Sloan Prospecting Co.'s No. 1 Sanford, approximately 300 ft. N and 300 ft. E. SW cor. B. Sanford 49-ac. tr. in M. M. Vann Sur. — Drlg. 1,970 ft.
Sloan Prospecting Co.'s No. 1 Windham, H. English H.R.S. — Tested dry 2,680 ft; drlg. sandy shale 3,010 ft.

WILDCAT OPERATIONS IN MISSISSIPPI

Company, farm and location—	Remarks:
CLARK COUNTY	
Gulf Ref. Co.'s No. 1 Box, 526 ft. W, 498 ft. N, C, SE. Sec. 11-2n-15e	T.A. 4,515 ft.
CLAY COUNTY (Cable tools)	
Ohio Oil Co.'s No. 1 Cantrell, NE cor., Sec. 16-15-5	Drlg. 3,790 ft.
GRENADA COUNTY	
Carter Oil Co. et al's No. 2 Dubard, NW cor., Sec. 18-22n-4e	Dry and abd. 3,023 ft.
HINDS COUNTY	
Attkisson & Dyer's No. 1 Downing et al, SE NE, Sec. 27-6-1	S.D. funds 1,980 ft.
Howard Oil Co.'s No. 1 Jackson College, C NW NW, Sec. 9-5-1e	S.D. 74 ft.
Industrial G. & E. Co.'s No. 1 Ill. Central R.R., 2,400 ft. E, 100 ft. S, C, Sec. 4-5n-1e	Waiting on csg.; T.D. 2,465 ft.
Southern Pet. Co.'s No. 1 Wilson (was Tri-State O. & G. Co.'s), 320 ft. E, 240 ft. N, SW cor. SE NE, Sec. 28-6-1e	S.D. 20 ft; W.O.
JASPER COUNTY	
Bay Springs Pet. Co.'s No. 1 Keys, C NW NE, Sec. 2-12-9	S.D. fuel 1,520 ft.
MONROE COUNTY	
Amory Dev. Co.'s No. 1 Bourland, Sec. 2-13-19	S.D. 3,015 ft.
Park Bowser et al's No. 1 Cowart, second hole, Sec. 2-12-19	Arranging to set 6⅝-in. 3,190 ft.
RANKIN COUNTY	
Attkisson & Dyer's No. 1 Valentour, 300 ft. S, 200 ft. E, NW cor., Sec. 18-5n-3e	Rigging up.
Grandstaff et al's No. 1 Carr, 2,780 ft. W, 550 ft. N, SE cor., Sec. 12-5n-1e	Repairing rig 2,345 ft.
Harding & Flint's No. 1 Webb, center Lot 32, Blk. B, East Jackson Place, Jackson City Subd., Sec. 13-5-1	S.D. funds 380 ft.
R. A. Moore et al's No. 1 Interior Lbr. Co., Sec. 28-6-1e	S.D. 900 ft.
Cleve Love's No. 1 Muse, SE cor. SW SW, Sec. 32-7-4e	Drlg. 2,382 ft.
SCOTT COUNTY	
M. U. Culley et al's No. 1 Owens, Sec. 2-8-9	Derrick.
WARREN COUNTY	
Dixie Pet. Co.'s No. 1 Henry, 1,375 ft. W, 380 ft. N, SE cor. NE, Sec. 36-17-4, of Choctaw Div. on Lot 2	Dry and abd. 3,271 ft.
Eagle Bend O. & G. Co.'s No. 1 Kiger, SW cor. SW SE, Sec. 9-18-3	Began May 15; repairing derrick 75 ft.
WINSTON COUNTY	
Miss. Drlg. Co.'s No. 1 Sarbrough, NW cor., Sec. 15-13-14	Arranging to make D.S. test 1,-173 ft.
YALOBUSHA COUNTY	
Collett-Carter Oil Co.'s No. 2 Blackmur, 990 ft. W, 285 ft. N, C, Sec. 7-11-4	Drlg. 2,977 ft.

LOUISIANA-ARKANSAS PROVEN AREAS

(Continued from Page 30)

Palmer Corp.'s No. 1 Clement, 2,960 ft. N, 1,320 ft. E, SW cor., Sec. 10-16-6 — Set 6-in. 2,300 ft.
Southern Carbon Co.'s No. 2-B Thomason, 1,980 ft. S, 2,080 ft. W, NE cor., Sec. 23-16-6 — 32,796,000 ft. gas 2,442 ft.
United Carbon Co.'s No. 1 Mann, 1,320 ft. S, 1,921 ft. W, NE cor., Sec. 13-16-5e — Completed May 2: 12,786,000 ft. gas 2,450 ft.
United Carbon Co.'s No. 2 Cooper, 660 ft. N, 3,551 ft. E, SW cor., Sec. 13-16-6 — Changing location.

SABINE PARISH—ZWOLLE

W. M. Coates' No. 1 Williams, NE cor., Sec. 23-7-11 — Rigging up.
W. M. Coates' No. 1 McNeely, NW cor. NE NW, Sec. 14-7-11 — Rigging up.
W. M. Coates' No. 4-A Sabine Lbr. Co., Sec. 1-7-11 — Set 6-in. 2,186 ft; T.D. 2,197 ft.
Hawkins et al's No. 1 Moran, Sec. 1-7-11 — 400 ft. oil in hole 2,620 ft; W.O. S.R.
O. A. Gautier et al's No. 1 Mischell, 330 ft. E, 150 ft. Hawkins & Antoon's No. 1 Newton, Sec. 1-7-11 — Began May 13; drlg. 50 ft.
N, SW cor. SE NW, Sec. 30-8-12 — Fishing 2,250 ft.
Jordan Drlg. Co.'s No. 2 La. Long Leaf Lbr. Co., Sec. 3-7-11 — Set 6⅝-in. 2,350 ft.
Zeke Lohman's No. 1 McCormick, 660 ft. E, 330 ft. N, SW cor. NE SW, Sec. 2-7-11 — Derrick.
Lyons & Neely's No. 2 Byrd, Sec. 1-7-11 — Began May 15; set 10-in. 100 ft; drlg. 600 ft.
L. K. McGuffin's No. 1 Bush, NW cor. NW SE, Sec. 1-7-11 — Location.
Pelican Nat. Gas Co.'s No. 9 La. Long Leaf Lbr. Co., 990 ft. W, 655 ft. N, SE cor. SW SE, Sec. 3-7-11 — Drlg. 2,595 ft.
George Pipes, tr.'s No. 1 Byrd, Sec. 1-7-11 — Began May 16; set 10-in. 95 ft. drlg. 450 ft.
Sabine Royalties Co., Inc.'s No. 1 Hill, 400 ft. S, 200 ft. E, NW cor. NE NE, Sec. 5-7-11 — W.O.S.R. 2,506 ft.
Sabine Prod. Co.'s No. 3 Pearce, 858 ft. N, 530 ft. W, SE cor. SE NW, Sec. 10-7-11 — Drlg. 1,350 ft.
Eddie Self's No. 1 Jacobs, Sec. 1-7-11 — Drlg. 1,000 ft.
A. F. Tarver's No. 1 Cutrer, 330 ft. S and E, NW cor., Sec. 12-7-11 — Rigging up.
The Texas Co.'s No. 1 DeLatia et al, 1,070 ft. W, 990 ft. N, SE cor., Sec. 3-7-11 — Rigging up.
Houston-Sabine Prod. Co.'s No. 1 Sabine Lbr. Co. (was Triangle Pet. Co.'s No. 2 Sabine Lbr. Co.), 330 ft. N and E, SW cor., Sec. 36-8-12 — Reaming 1,950 ft.
J. C. Walton's No. 1 Sabine Lbr. Co., 300 ft. S, 300 ft. W, NE cor. NW, Sec. 11-7-12 — Tested 2,376 ft; S.O; W.O.

WEBSTER PARISH

Cassidy & Davis' No. 1 Nickerson, 300 ft. S, 300 ft. W, NE cor. SW, Sec. 29-23-10 — S.D. 150 ft.

ARKANSAS

UNION COUNTY—EL DORADO

Lion O. & R. Co.'s No. 9-A G. P. Hayes, 242 ft. S, 246 ft. W, NE cor. Lot 5, NE, Sec. 4-18-15 — Drlg. red beds 3,516 ft.
Rice Drlg. Co.'s No. 1 Watley, 150 ft. S, 150 ft. E, NW cor. SW, Sec. 7-17-15 — Dry and abd. 2,186 ft.
Southern Prod. Co.'s No. 1 Wingfield, NE cor. SE NW, Sec. 16-19-15 — S.D. 2,608 ft.

UNION COUNTY—URBANA

Marine Oil Co.'s No. 1 Winn est., 330 ft. S and E, NE cor. S½ NW, Sec. 11-18-13 — Set 6⅝-in. 3,570 ft; T.D. 3,586 ft.
Marine Oil Co.'s No. 1 Union Sawmill Co., 330 ft. N and E, SW cor. SE SE, Sec. 2-18-13 — Drlg. red beds 3,230 ft.

Marine Oil Co.'s No. 2-E Thompson, 330 ft. N, 330 ft. E, SW cor. NE NE, Sec. 10-18-13 ..... Location.
Wilson & Chapman's No. 1 Adkins, 330 ft. N and W, SE cor. SW NE, Sec. 2-18-13 ..... Derrick.

EAST TEXAS

HARRISON COUNTY

Calatex O. & G. Co.'s No. 6 Argus, 755 ft. N, 699 ft. W, Mile Post 27, in J. Womack Sur. ..... Location.

PANOLA COUNTY

Ark.-La. P. L. Co.'s No. 14 Werner, 341 ft. S, 300 ft. W, NE cor. Werner 74-ac. tr., Ben C. Jordon Sur. .. Rigging up.
Daisy O. & G. Co.'s No. 1 Rucka, John Palmer Sur. .... S.D. 2,600 ft.
Dillon & Bradham's (was W. G. Banks et al's) No. 1 C. O. Baldwin, 1,395 ft. W, 1,562 ft. S, NE cor. Baldwin 200 ac. in Hampton West Sur. ..... S.D. 1,555 ft.
S. E. Bell et al's No. 1 Burnett Lbr. Co., C, S. B. Hendricks Sur. ..... S.D; W.O. 3,335 ft.
C. D. Neff et al's No. 6 Brumble, H. C. Jordan Sur. .... Derrick.
United Prod. Corp.'s No. 17 Steele, 1,320 ft. N, 660 ft. W, SE cor. C. D. Steele lease, in B. C. Jordan Sur... Location.
United Prod. Corp.'s No. 10 Warner, 388 ft. N, 2,467 ft. W, SW cor. Thos. Cox Sur. in Ben Jordon Sur. .... Drlg. lime 3,055 ft.
Southwestern O. & G. Co.'s No. 1 E. R. Vinson, 3,005 ft. S, 1,091 ft. W, NE cor. C. T. Anderson Sur. ..... Drlg. 2,650 ft.

MISSISSIPPI

HINDS COUNTY

Cleve Love et al's No. 2 Ridgeway-McGhee, SE cor. NW, Sec. 2-5-1e ..... Derrick.

RANKIN COUNTY

Miss. G. & F. Co.'s No. 1 Hanna, SW cor. SW NE, Sec. 14-5-1e ..... Derrick.

GULF COAST FIELDS AND WILDCATS

(Continued from Page 34)

Sun Oil Co.'s No. 1 Anna Higgins, Wm. Bloodgood Sur., 230 ft. from E line and 31 ft. from S line 10-ac. tract ..... Rigging.
The Texas Company's No. 2 Winfree, west flank, W. D. Smith Sur., 264 ft. N, 50 ft. W at right angles out of SE cor. of lease ..... Drlg. shale and sand 5,465 ft.
The Texas Company's No. 3 Winfree, west flank, W. D. Smith Sur., 478 ft. N and 50 ft. W at right angles .. Drlg. sticky shale 5,629 ft.
The Texas Company's No. 4 Wilburn (D.D.), Henry Griffith League, approximately 1,700 ft. from W line and 50 ft. from S line of tract ..... Tested salt water 5,292 ft.; pulled screen to deepen.
The Texas Company's No. 6 Wilburn, Henry Griffith League, 250 ft. W of No. 4 and 50 ft. from S line of lease ..... Drlg. sand and boulders 1,340 ft.
Yount Lee Oil Co.'s No. 9 Chambers (D.D.), William Bloodgood Sur., 550 ft. from N line and 1,660 ft. from W line of tract ..... Drlg. sand and shale 5,452 ft.
Yount Lee Oil Co.'s No. 3 Winfree, W. D. Smith Sur., 190 ft. out of NE cor. of tract ..... Drlg. sand and lime 4,376 ft.

RACCOON BEND—AUSTIN COUNTY

Humble and Valley's No. 1 Martha Remmert ..... Location.

HUMBLE—HARRIS COUNTY

Rio Bravo Oil Co.'s No. 2 H.E.&W.T., Adams Sur., 250 ft. N along railroad tract from No. 1 and 25 ft. W from center of said tract ..... Drlg. sandy shale 4,003 ft.
Rio Bravo Oil Co.'s No. 1 Westheimer, John Brown Jones One-Third League, 800 ft. from E line and 100 ft. from S line of Blk. 1, in Lot 48, Westheimer Subd. ..... Location.
Sun Oil Co.'s No. 16 Bender, Adams Sur., Bender South Addition, 110 ft. N of N line of H.E.&W.T., 150-ft. right of way and 75 ft. E of C line of right of way.. Drlg. sand and shale 3,596 ft.
Sun Oil Co.'s No. 23 Bender, Adams Sur., 300 ft. NW of No. 21 in line with Nos. 21 and 15 ..... Set 2 jts. 4½-in. screen 4,807 ft.; tested salt water; abandoned.
Sun Oil Co.'s No. 24 Bender, W. B. Adams Sur., 24 ft. N of Rio Bravo's No. 2 H.E.&W.T. on Sun's east line ..... Drlg. sand and shale 2,065 ft.
Sun Oil Co.'s No. 1 O'Connor, Adams Sur., 75 ft. from S line and 75 ft. from E line of 1-acre tract by S.P. depot ..... Abandoned in shale 3,856 ft.

PIERCE JUNCTION—HARRIS COUNTY

Rio Bravo Oil Co.'s No. 14-A Settegast (workover) ..... Sand and shale showing oil 5,350 ft.; reaming to bottom.
Rio Bravo Oil Co.'s No. 2-A Settegast, J. Kopman Sur., 400 ft. S and 200 ft. N of NE cor. "A" lease ..... Set 55 ft. 4½-in. screen 4,255 ft.; comp. flowing 2,500 bbls. pipe line oil, 500 pounds pressure on ⅝-in. choke.
Rio Bravo Oil Co.'s No. 22-A Settegast, J. Kopman Sur. No. 44, 900 ft. S and 200 ft. W of NE cor. "A" lease.. Location.
Rio Bravo Oil Co.'s No. 102 G.H.&S.A. (D.D.), 875 ft. W of point where C line of railroad crosses line of B.B.B.&C. Sur. ..... Set screen 4,835 ft.; comp. flowing 420 bbls. oil daily.

LOST LAKE—CHAMBERS COUNTY

Pure Oil Co.'s No. 13 Mayes, B.B.B.&C. Sur. No. 4, 75 ft. W and 700 ft. S of NE cor. of survey ..... Drlg. sticky shale 4,052 ft.

SPINDLETOP—JEFFERSON COUNTY

Gulf Prod. Co.'s No. 7 Mann (D.D.), John Douthit Sur.... Sand showing oil 3,768-83 ft.; set 1 jt. 4½-in. screen; bailed salt water; pulling screen and tubing.

HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 21 Cade, Fitzsimmons Sur., 150 ft. W of No. 17 ..... Drlg. hard sand rock 3,567 ft.

NORTH DAYTON—LIBERTY COUNTY

M. L. Gray's No. 1 Schindler, H.E.&W.T. Sur. No. 120, 100 ft. E and 350 ft. N of SW cor. of survey ..... Salt 392-98 ft.; abandoned.
Harrison-Abercrombie's No. 2 Jones, H.&T.C. Sur. No. 125, 50 ft. from N line and 450 ft. from E line of tract ..... Drlg. water sand 1,384 ft.

ORCHARD—FORT BEND COUNTY

Gulf Prod. Co.'s No. 29 Moore, John Frazier Sur., 600 ft. N of No. 26 in line with Nos. 23 and 26 ..... Drlg. sticky shale 4,030 ft.

DAMON MOUND—BRAZORIA COUNTY

D. C. Wellock's No. 1 Hamon, John P. Mills Sur., 1,115 ft. NE line and 60 ft. W line Blk. 1 ..... Shut down 240 ft.

ALLEN—BRAZORIA COUNTY

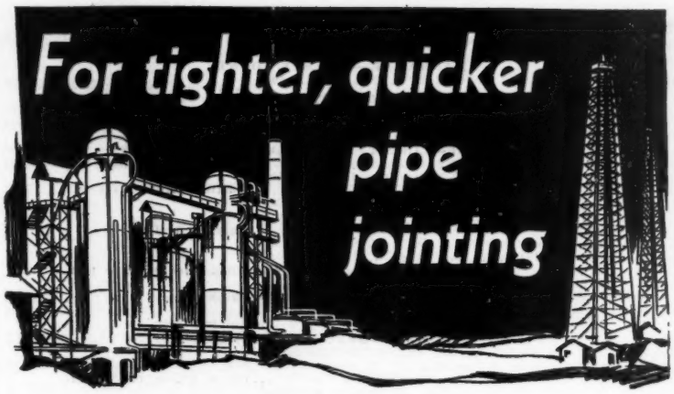
Mills Bennett Prod. Co.'s No. 1 Allen (workover), J. G. McNeel Sur., 1,211 ft. from W line and 2,569 ft. from N line of survey ..... Shale 5,376 ft.; drill pipe stuck; abandoned.
Mills Bennett Prod. Co.'s No. 1 Poole, T. & W. Alley League, 1,390 ft. from E line and 100 ft. from S line (workover) ..... Heaving shale 4,902 ft.; drlg. sidetracked hole to sand and shale showing oil 4,485 ft.; cmtd. csg. 4,335 ft.

CLAY CREEK—WASHINGTON COUNTY

Sun Oil Co.'s No. 5 Carraway, J. F. Perry Sur., 600 ft. NW No. 2 and 200 ft. from W line ..... Drlg. shale 1,772 ft.
Sun Oil Co.'s No. 6 Jamer, J. F. Perry Sur., 600 ft. NW No. 5 and 1,300 ft. from SW line ..... Rig.

ESPERSON—LIBERTY COUNTY

Cranfill-Reynolds Oil Co.'s No. 7 Davis, David Kokernot Sur., 100 ft. S of No. 4 ..... Drlg. shale and lime 5,022 ft.
Cranfill-Reynolds Oil Co.'s No. 1-C Kirby fee ..... Junked and abnd; T. D. 6,154 ft.
Cranfill-Reynolds Oil Co.'s No. 2 Moore's Bluff (workover) ..... Total depth 3,629 ft.; sidetracked to sand 2,330 ft.; set screen.



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BLUE RIDGE—FORT BEND COUNTY

Teschow, Cady et al's No. 5 Blakely, E. Drew Sur., 90 ft. E, 150 ft. S of NW cor. of E half, Lot 4, Blk. F .. Oil sand 2,980 ft.; reaming to set csg.

HANKAMER—LIBERTY COUNTY

Gulf Prod. Co.'s No. 14 Boyt, H.&T.C. Sur. No. 32, 500 ft. N of No. 10 ..... Rig.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 115-A Cotton ..... Comp. 73 bbls. oil 475 ft.
Rio Bravo Oil Co.'s No. 116-A Cotton ..... Drlg. gumbo 103 ft.

MOSS BLUFF—LIBERTY AND CHAMBERS COUNTIES

Humble Oil & Ref. Co.'s No. 2 Sergeant, east flank ..... Standing 5,931 ft.
Humble Oil & Ref. Co.'s No. 7 Sterling, J. McFaddin Sur., 350 ft. S and 100 ft. W No. 6 Sterling ..... Cutting screen 5,976 ft.
Texas Gulf Sulphur Co.'s No. 1 V. R. McManus, B. M. Spinks Sur., 200 ft. S and 100 ft. W of NE cor. 125-acre tract ..... Sulphur test.
Texas Gulf Sulphur Co.'s No. 1 D. J. Harrison, B. M. Spinks Sur., 1,694 ft. N and 1,300 ft. E of SW cor. 485-acre tract ..... Abandoned sulphur test.
Texas Gulf Sulphur Co.'s No. 2 D. J. Harrison, B. M. Spinks Sur., 2,600 ft. E and 100 ft. N of SW cor. tract. Sulphur test.
Texas Gulf Sulphur Co.'s No. 1 R. W. Sargent, McFaddin Sur., 3,400 ft. E and 250 ft. N of SW cor. tract ..... Sulphur test.

REFUGIO—REFUGIO COUNTY

Houston Oil Co.'s No. 10 Wilson Heard, Refugio town tract, 150 ft. from N line and 150 ft. from E line of S 50-acre tract ..... Cmtd. 9⅝-in. csg. 550 ft.
Houston Oil Co.'s No. 5 Mrs. M. H. Ryals, Refugio town tract, 150 ft. from N line of tract and 527 ft. east of No. 1 ..... Coring sand and shale 3,632 ft.
Houston Oil Co.'s No. 6 Pratt-Hewitt-Rooke (D.D.), Thomas Mullen Sur., 1,150 ft. N and 200 ft. W of SE cor. of tract ..... Total depth 3,708 ft.; sidetracking in sticky shale 2,575 ft.
Larco Oil & Gas Co.'s No. 1 Strauch, C Lot 13, Blk. 2 ... Total depth 3,695 ft.; set 20 ft. screen in sand 3,671-96 ft.; sanded.
Mission Drilling Co.'s No. 2 J. J. O'Brien, Refugio town townsite ..... Total depth 6,502 ft.; showing salt water; plugged to 6,400 ft.
Mission Drilling Co.'5s No. 2 J. J. O'Brien, Refugio town tract, 150 ft. from E line and 150 ft. from S line 12½-acre tract ..... Rig.
Moody-Seagraves Prod. Co.'s No. 3 O'Connor (D.D.), Refugio Town tract, 1,700 ft. from W line and 150 ft. from N line tract ..... Drlg. sand 5,452 ft.
Moody-Seagraves Prod. Co.'s No. 6 Morgan-O'Connor .... Total depth 6,470 ft.; sidetracking in hard sand 6,383 ft.
Moody-Seagraves Prod. Co.'s No. 8 O'Connor, Refugio town tract, 350 ft. east of No. 1 and 150 ft. from S line of lease ..... Oil sand 6,423-48 ft.; cmtd. 7-in. csg. 6,435 ft.
Moody-Seagraves Prod. Co.'s No. 2-A J. F. B. Heard ... Rig standing.
Pearson Properties' No. 5 Ryals, 174 ft. from S line of lease and 475 ft. E of No. 3 ..... Drlg. shale 1,725 ft.
Ed Price's No. 3 Mission River, Refugio town tract, 750 ft. up river from No. 2 on S bank of river ..... Shut down 350 ft.
United Prod. Corp.'s No. 6 O'Brien, 150 ft. from S line of tract, 350 ft. W No. 3 ..... Cmtd. 13-in. (O.D.) csg. 1,688 ft.
United Prod. Corp.'s No. 9 O'Brien, 150 ft. S of S line and 175 ft. E of extended W line of Moody-Seagraves' O'Brien "B" lease ..... Sand showing oil 6,451-62 ft.; cmtd. 7-in. (O.D.) 6,450 ft.; set 18 ft. 5-in. screen; comp. gas well 1,975 lbs. on tubing and 2,100 lbs. on csg.; shut in.
United Prod. Corp.'s No. 6 Power, S Blk. 83, Refugio townsite ..... Sand showing oil 6,450-58 ft.; cmtd. 7-in. csg. 6,448 ft.; set 18 ft. 5-in. screen; swabbing.
United Prod. Corp.'s No. 3 Mitchell, 150 ft. from N line and 609 ft. from W line of tract ..... Total depth 6,458 ft.; plugged to 6,445 ft.; showed salt water; to plug back.
United Prod. Corp.'s No. 6 A. W. J. Heard, Refugio town tract, 1,253.6 ft. from W line and 257 ft. from S line of tract ..... Formerly comp. in sand 3,665-72 ft.; deepened to 3,715 ft.; plugged to 3,674 ft.

SOUTH LOUISIANA FIELDS
LOCKPORT—CALCASIEU PARISH

Vacuum Oil Co.'s No. 31 Miller (D.D.), 360 ft. from N line and 900 ft. from W line of SW NE Sec. 8-10s-9w ..... Set 1 jt. 4½-in. screen 5,283 ft.; comp. flowing 500 bbls. fluid, 30 per cent water, 560 lbs. pressure on ½-in. choke.
Vacuum Oil Co.'s No. 7 State, 319 ft. N and 260 ft. W SE cor. NE Sec. 8-10s-9w ..... Drlg. sandy shale 6,610 ft.
Yount Lee Oil Co.'s No. 2 Miller, 125 ft. N and 120 ft. W SE cor. NE NW Sec. 8-10s-9w ..... Drlg. sandy shale 6,283 ft.

EDGERLY—CALCASIEU PARISH

Rex Pet. Co.'s No. 2 Prairie Narroni, Sec. 21-9s-11w, 365 ft. from S line and 50 ft. from E line of lease ..... Total depth 4,143 ft. in salt; sidetracked 3,890 ft.; drlg. shale 3,914 ft.

HACKBERRY—CAMERON PARISH

R. E. Seiss' No. 2 J. M. Vincent ..... Total depth in rock 2,042 ft.; waiting casing to set on sand 1,965-95 ft.
The Texas Company's No. 3 State ..... Derrick.
Yount Lee Oil Co.'s No. 34 State ..... Location.
Yount Lee Oil Co.'s No. 36 State ..... Location.
Yount Lee Oil Co.'s No. 37 State ..... Location.
Yount Lee Oil Co.'s No. 38 State ..... Location.
Yount Lee Oil Co.'s No. 39 State ..... Location.

VINTON—CALCASIEU PARISH

Marrs McLean's No. 11 Gray (D.D.), Sec. 33-10s-12w .... Drlg. out B.P.V. 1,869 ft.; to deepen.
Vinton Pet. Co.'s (Lucky Ten), No. 1 Lizzo ..... Drlg. heaving shale 3,560 ft.

BAYOU BOUILLON—ST. MARTIN PARISH

Humble Oil & Ref. Co.'s No. 4 State ..... Abandoned 5,246 ft.

SWEET LAKE—CAMERON PARISH

Magnolia Pet. Co.'s No. 2 Sweet Lake, Sec. 5-13s-7w .... Cleaning up after fire; total depth 4,876 ft.

STARKS—CALCASIEU PARISH

Gulf Ref. Co.'s No. 27 Lutcher-Moore, Sec. 19-9s-12w .... Drlg. shale 1,376 ft.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 762 (workover) ..... Salt 5,864-9,250 ft.; plugged to sand 4,964 ft.; sidetracked to sand 5,064-72 ft.; cmtd. csg.
Union Sulphur Co.'s No. 765 fee, Sec. 29-9s-10w ..... No report.
Union Sulphur Co.'s No. 767 fee, 328 ft. E and 180 ft. N of C Sec. 29-9s-10w ..... Drlg. gumbo 980 ft.

MISCELLANEOUS WILDCATS
TEXAS
AUSTIN COUNTY

Empire Gas & Fuel Co.'s No. 1 Kuntze, San Felipe ..... Drlg. shale 7,710 ft.
O'Hara et al's No. 1 Schrader ..... Fishing 2,920 ft.
Parmerson & Cafferkey et al's No. 1 W. M. Schlecte, John Fitzgibbons Sur., 1,850 ft. from SE line and 3,100 ft. from NE line of survey ..... Drlg. shale 1,112 ft.
United Oil Syndicate's No. 1 Speer, A. A. Talmadge Sur.. Set 48 ft. 4½-in. screen 1,866 ft.; bailed salt water.

BRAZORIA COUNTY

The Texas Company's No. 1 Belcher, Manvel, 167 ft. SE of NW line and 223 ft. NE of SW line, Lot 18, Blk. A, Suburban Gardens Subd. ..... Sand and boulders 930 ft.; set 18-in. surface pipe.

BURLESON COUNTY

Mid-South Oil Co.'s No. 1 Duckworth ..... Shut down 2,646 ft.
Reynolds Oil Co.'s No. 1 Harris, 500 ft. from W line and 400 ft. from N line of J. M. McKean Sur. ..... Shut down 400 ft.

CALHOUN COUNTY

The Texas Company's No. 1 Smith, J. Timmins Sur., Will Mousin and Driscoll Subd. ..... Drlg. sticky shale 5,458 ft.

COLORADO COUNTY

United North & South Oil Co.'s No. 1 H. P. Lockwood, 3,100 ft. S line and 2,000 ft. W line J. R. Johnson Sur. ..... No report.

FORT BEND COUNTY

H. R. Cullen's No. 1 Lockwood, John Rabb Sur., 475 varas from line of E half of survey and 1,345 ft. from N line ..... Set 30 ft. 6⅝-in. screen 3,087 ft. and 12 jts. 6⅝-in. liner with 4¾-in. liner to top; comp. flowing 300 to 400 bbls. pipe line oil daily; csg. pressure 380 lbs. and liner pressure 350 lbs.; ¼-in. choke; gravity 24.5° (cor.).

GRIMES COUNTY

Rianjo Oil Co.'s No. 2 Cuthrell, Pat B. O'Connor Sur., center of 110-ac. tract ..... Derrick.

HARDIN COUNTY

Plummer & McDaniel's No. 1 T. S. Reed, 2,500 ft. from W line and 500 ft. from N line of T.&N.O. Sur. No. 296 ..... Rig.

HARRIS COUNTY

Hattie Baldwin's No. 1 Krahn, 250 ft. out of NW cor. L. Finn Sur. ..... Drlg. 200 ft.
Cypress Oil & Dev. Co.'s No. 1 C. Fritz, 500 ft. from N line and 500 ft. from E line of J. Duckworth Sur..... Sulphur water sand 451 ft.; cmtd. 8-in. csg.
Humble Oil & Ref. Co.'s No. 5 Minnetex, Mykawa, 150 ft. from S line and 200 ft. from W line, Lot 261, William Lovett Sur. ..... Location.
Humble Oil & Ref. Co.'s No. 6 Minnetex, Mykawa, William Lovett Sur., C of Lot 254 ..... Drlg. sandy shale 4,867 ft.

JACKSON COUNTY

Chicago-Gulf Co.'s No. 1 Rogers (workover) ..... No report.

JEFFERSON COUNTY

Humble Oil & Ref. Co.'s No. 1 McFadden, T.&N.O. Sur. 234 ..... Reaming to bottom 7,635 ft.
The Texas Company's No. 4 Pipkin, Big Hill ..... Total depth 5,970 ft.; hole heaved back to 5,910 ft.; fishing.

LIBERTY COUNTY

Hamm et al's No. 1 Harvard, Davis Hill ..... Gumbo 1,015 ft.; shut down.
Tucker et al's No. 1 Bell, H.&T.C. Sur. No. 4 ..... Gumbo 560 ft.; shut down.

MATAGORDA COUNTY

H. C. Cockburn's No. 3 Hawkins, Shepherds Mott, 4,810 ft. SE along SW line of Farnum Fry Sur., thence 242 ft. NE at right angles ..... Drlg. gumbo 1,715 ft.
Empire Gas & Fuel Co.'s No. 1 Boker, Citrus Grove ..... Drlg. hard sand and shale 6,286 ft.

MONTGOMERY COUNTY

Mike Hogg's (Lake Creek Oil Co.'s) No. 1 Hunt, south of Conroe ..... Drlg. shale 2,120 ft.
H. W. Lowrie, Jr.'s No. 1 Groggan (G. J. Sunday), Cyrus Wickerson Sur. ..... Rig.
Price & Wilhite's No. 2 Juerges ..... Drlg. shale 4,086 ft.

ORANGE COUNTY

Altex Oil Co.'s (Veteran Oil Co.) No. 1 Reed, A. Nelson Sur. No. 1, 500 ft. from N line and 250 ft. from E line of tract ..... Formerly temporarily abnd. 4,603 ft.; sidetracked hole 1,200 ft.; drilled to 1,820 ft.; shut down.
Crew Oil Co.'s No. 1 Mansfield ..... Abnd. 1,460 ft.; skidding rig 50 ft. east.

POLK COUNTY

Freeman et al's No. 2 Freeman ..... Drlg. sand and shale 3,015 ft.

REFUGIO COUNTY

Blanco Creek Oil Co.'s No. 1 Damaan, 150 ft. from N line and 150 ft. from W line of Blk. 16, Bonnie View Ranch Subd. ..... Preparing to resume drlg. 4,017 ft.
Humble Oil & Ref. Co.'s No. 1 O'Connor, John Keating Sur., 6,012 ft. S from NE cor. along SE line of Lon T. Rios Sur., thence 7,375 ft. W at right angles in John Keating Sur. ..... Location.

SAN JACINTO COUNTY

E. P. Edward et al's No. 1 Bennett, northwest of Cold Springs ..... Spudded and shut down.

TYLER COUNTY

King Oil Co.'s No. 1 Caswell ..... Sand and shale showing oil 1,255 ft.; cmtd. 6-in. csg. 1,218 ft.
Allied Pet. Co.'s (Texas Southern Pet. Co.'s) No. 3 Wilson, Mrs. E. Cherry Sur. No. 798, 1,500 varas from W line and 600 varas from N line ..... Shut down 4,875 ft.
Lew Wentz' No. 1 Mann, James Seals Sur., 330 ft. out of SW cor. 804.25-ac. tract ..... Rig.

VICTORIA COUNTY

Houston Oil Co.'s No. 1 Conrad, T.&N.O. Sur. No. 1, 1,100 ft. from SW line and 100 ft. from NW line .... Rig.
Simpson-Fell and Westheimer et al's No. 1 Levi, 2,200 ft. from SW line and 2,000 ft. from NW line of S.A.&M.G. Sur. No. 4 ..... Coring sandy shale 3,576 ft.
T. B. Slick estate's No. 1 McFaddin, J. Vairan Sur., 17,700 ft. NE along SE line from S cor. of survey and thence 5,050 ft. NW at right angles ..... Sand showing gas 3,502-12 ft.; running csg.; drill stem test showed 650 lbs. pressure ⅜-in. choke.
United Prod. Corp.'s No. 4-A McFaddin, M. Traviesa Sur., 1,320 ft. W along N line of C. L. Mann Sur. from NE cor. and 1,980 ft. N at right angles ..... Drlg. hard lime 1,046 ft.

WASHINGTON COUNTY

Joe Baker et al's No. 1 Kramer, Brenham, 600 ft. S and 300 ft. W NE cor. 92 acres ..... Drlg. shale 1,982 ft.
Penn-Tex Oil Co.'s No. 2 Kamas Brenham, S. M. Williams Sur. ..... No report.

WHARTON COUNTY

H. H. Givens' No. 3 Hudgins, I. B. Phillips Sur., 19 ft. W of No. 2 ..... Drlg. gumbo 1,896 ft.
Poole & Chappell's No. 1 Lee, G.H.&H. Sur., Sec. 20, 75 ft. E and 25 ft. N from SW cor. Sec. 20 ..... Abandoned 757 ft.

SOUTH LOUISIANA
BEAUREGARD PARISH

Beauregard Gas & Oil Co.'s No. 1 J. E. Cochran, 400 ft. S and 700 ft. W from NE cor., Sec. 34-4s-12w ..... Drlg. shale 2,431 ft.

CALCASIEU PARISH

Crawford Doyle's No. 1 Johnson, Sec. 23-9s-13w ..... Shut down 875 ft.
J. O. Davis' No. 1 Industrial, Sec. 29-9s-10w ..... Set 6⅝-in. csg. with 172 ft.; 6⅝-in. screen on bottom 6,568 ft.; drilled plug and bailed dry; standing.
Wilfred Lahay's No. 1 Jardell, Sec. 16-10s-12w ..... Shut down 3,258 ft.
Dr. Thomas et al's No. 1 John Hewitt ..... Location.
Vacuum Oil Co.'s No. 1 Walt (D.D.), 225 ft. out of SE cor. Sec. 12-9s-7w ..... Drlg. shale and lime 6,181 ft.

CAMERON PARISH

Vacuum Oil Co.'s No. 2 Cameron Meadows, 3,120 ft. S and 1,900 ft. W from NE cor. Sec. 21-14s-9w (500 ft. S No. 1) ..... Drlg. sticky shale 4,008 ft.
The Texas Company's No. 7 State, Calcasieu Lake ..... Location.

IBERIA PARISH

Jefferson Lake Oil Co.'s No. 11 Lake Peigneur, Jefferson Island ..... Shut down 869 ft.
Jefferson Lake Oil Co.'s No. 12 Lake Peigneur, 3,100 ft. due W NE cor. Sec. 58-12s-5e ..... Location.

IBERVILLE PARISH

Standard Oil Co.'s No. 1 Gay, Bayou Choctou ..... Drlg. sand 4,316 ft.
Standard Oil Co.'s No. 7 Wilbert, Bayou Blue ..... Derrick.
Standard Oil Co.'s No. 6 Schwing, Bayou Blue, Sec. 73-9s-11e, 317 ft. S of No. 2 ..... Drlg. gumbo 810 ft.
Standard Oil Co.'s No. 7 Schwing, Bayou Blue, Sec. 74-9s-10w, N 45 degrees, W 1,800 ft. from No. 5 .... Location.
Standard Oil Co.'s No. 9 Wilbert, Bayou Des Glaise, 700 ft. E and 760 ft. N of SW cor. SE SW Sec. 78-8s-8e.. Drlg. sandy lime 3,527 ft.

JEFFERSON DAVIS PARISH

A. V. Peters' No. 1 Smith Subd., Welsh, 1,050 ft. N and 180 ft. E SW cor. Sec. 22-9s-5w ..... Pumping water and oil 1,160 ft.

PLAQUEMINES PARISH

Humble Oil & Ref. Co.'s No. 4 Cockrell-Moran, Sec. 14-20s-26e, 1,905 ft. S and 2,860 ft. E of station ..... Cmtd. 13⅜-in. csg. 309 ft.

TERREBONNE PARISH

The Texas Company's No. 6 State, Caillou Island ..... Total depth 4,486 ft.; fishing.
The Texas Company's No. 1 La.L.&E., Bay St. Elaine ... Cleaned hole 4,751 ft.; drlg. shale and lime 4,768 ft.
The Texas Company's No. 4 State, Dog Lake ..... Drlg. hard sand 4,068 ft.
The Texas Company's No. 3 La.L.&E., Bay Junop ..... Location.
The Texas Company's No. 4 La.L.&E., Bay Junop ..... Location.
The Texas Company's No. 6 State, Lake Barre ..... Drlg. sticky shale 3,432 ft.
The Texas Company's No. 10 State, Lake Barre ..... Location.
The Texas Company's No. 11 State, Lake Barre ..... Driving piling.
The Texas Company's No. 12 State, Lake Barre ..... Location.
The Texas Company's No. 13 State, Lake Barre ..... Drlg. sticky shale 2,390 ft.
The Texas Company's No. 14 State, Lake Barre ..... Location.

VERMILLION PARISH

Pure Oil Co.'s No. 1 Alliance Land, Sec. 34-11s-1w, 2,600 ft. N and 300 ft. E of SW cor. section ..... Drlg. sand with streaks of shale 2,351 ft.

WEST FELICIANA PARISH

Putnam Syndicate's No. 2 Como Plantation, Sec. 51-1s-4w. Cmtd. 8-in. csg. 1,498 ft.

WILDCAT OPERATIONS IN OKLAHOMA

(Continued from Page 26)

HASKELL COUNTY

Ault et al's No. 1 Harrison, CWL SE NE Sec. 14-9-19 .... Shut down 650 ft.
Ault et al's No. 1 Hall, NW SW SW Sec. 14-9-19 ..... Shut down 2,000 ft.
Ault et al's No. 1 Hall, SE NW Sec. 25-9-19 ..... Shut down 200 ft.
Finefield's No. 1 Ogle, NW cor. Sec. 6-7-20 ..... Fishing 600 ft.
Holden's No. 1 Phillip, SE cor. Sec. 3-9-18e ..... Shut down 1,860 ft.
Marion Oil's No. 1 Sanders, NW NE NW Sec. 10-9-18e.... Shut down 2,387 ft.

HUGHES COUNTY

Wright et al's No. 1 Ott, SE SW Sec. 15-5-11 ..... Shut down 1,645 ft.

KAY COUNTY

Wilwright Gas Co.'s No. 1 Wildegrube, NE SW Sec. 14-27-1 ..... Shut down 4,055 ft.
Lewis et al's No. 1 Harris, SE NW Sec. 14-25-1 ..... Location.
Peters & Buckles' No. 1 Hayes, NW NE NW Sec. 24-28-3 ..... Drlg. 3,630 ft.
Mummert Drlg. Co. et al's No. 1 Cormick, C NW SE Sec. 9-27-2 ..... Cleaning out 3,693 ft.
Blackwell Oil Co.'s No. 1 Harshman, Sec. 2-26-1w ..... Rig on ground.
Boucher Oil Co.'s No. 1 Jefferson, NE SW Sec. 32-26-1w.. Drlg. 4,592 ft.

KIOWA COUNTY

Christian's No. 1 Jones, NE SE Sec. 8-7-18w ..... Shut down 220 ft.

LATIMER COUNTY

Choctaw Gas' No. 1 Weaver, C NE NW Sec. 4-6-18 ..... Shut down 3,475 ft.
F. English's No. 1 Unknown, NW SE Sec. 16-6-19 ..... Shut down 1,542 ft.

LE FLORE COUNTY

Sooner Oil & Gas Co.'s No. 1 Peck, SE SW SE Sec. 22-7-26 ..... Drlg. 1,920 ft.

LINCOLN COUNTY

Mote-Wheeler's No. 1 Stafford, NW NE Sec. 32-17-4 .... Wilcox 4,535-51 ft.; water; abnd.

McINTOSH COUNTY

Patterson et al's No. 1 Smith, SW cor. NW SE Sec. 32-9-16 ..... Drlg. 5,702 ft.

MURRAY COUNTY

C. R. Williams et al's No. 1 Williams, C NE NE Sec. 21-1-4 ..... Drlg. 690 ft.

MUSKOGEE COUNTY

H. E. Dowd's No. 1 Hembree, C NW NE Sec. 23-10-19 .. Drlg. 750 ft.
Reboid's No. 1 Miller, SE NE NE Sec. 32-13-19 ..... Rig.
Sioux Oil Co.'s No. 1 Unknown, NW SE Sec. 21-11-19 .. Shut down 1,011 ft.

OKFUSKEE COUNTY

E. L. Robinson's No. 1 Rice, NW Sec. 2-10-9 ..... Location.
Shepard et al's No. 1 Neveas, SE NW SW Sec. 3-12-10.. Shut down 3,690 ft.

OKLAHOMA COUNTY

Citizens Oil Co.'s No. 1 Sage Barber, NE cor. Sec. 21-11-3w ..... Shut down 1,200 ft.
L. C. Hivick's No. 1 Sunset Addition, NW SW NW Sec. 17-11-3w ..... Shut down 5,515 ft.
J. F. Cuniff, trustee's No. 1 Church Land, NE NW SE Sec. 17-12-4w ..... Shut down 6,700 ft.

PAWNEE COUNTY

Comar's No. 1 Babstick, SW SE SE Sec. 18-22-5 ..... Drlg. 3,138 ft.
Rookstool's No. 1 Wylie, NW NE SW Sec. 6-20-5 ..... Shut down 1,950 ft.
Sperry et al's No. 1 Mullrap, SE SW Sec. 2-22-5 ..... Drlg. 2,465 ft.
Cochran et al's No. 1 Green, NE cor. SW Sec. 15-23-5 .... Rig.

PITTSBURG COUNTY

J. Morrison's No. 1 Fowler, NE SE Sec. 13-7-17 ..... Rig.
C. Kennedy's No. 1 Travis, C SW NE Sec. 15-7-14 ..... Rig.
C. Canady's No. 1 Jones, NW cor. Sec. 14-8-14 ..... Rig.

POTTAWATOMIE COUNTY

Droppleman et al's No. 1 Jones, SE NW Sec. 21-8-3 .... Rigging up standard tools 4,775 ft.

ROGER MILLS COUNTY

Ute Oil Co.'s No. 1 Williams, C SW Sec. 23-12-24w ..... Drlg. 4,830 ft.
L. C. Hivick's No. 1 Davis, C NW NE Sec. 4-11-26w .... Fishing 2,956 ft.

SEMINOLE COUNTY

Sunray Oil Co.'s No. 1 Sunray, NW SE Sec. 35-5-5 ..... Location.

STEPHENS COUNTY

Ross Southerd's No. 1 McKinney, NE cor. Sec. 25-1-8w .. Shut down 1,062 ft.

WASHITA COUNTY

Cooper & Terhune's No. 1 Blocker, NW cor. Sec. 29-8-19w. Drlg. 1,875 ft.
Burns & Prince's No. 1 Deck, SW cor. Sec. 21-8-18 ..... Shut down 1,050 ft.
Petroleum Holdings, Inc.'s No. 1 Music, NW cor. Sec. 10-9-20w ..... Shut down 280 ft.

OKLAHOMA PANHANDLE

TEXAS COUNTY

Western Prod. Co.'s No. 1 Gable, C NE Sec. 24-4-13 ..... Rig.
Three Way Oil Co.'s No. 1 Crane, SW NW Sec. 11-1-1E .. Shut down 4,625 ft.

SOUTHERN OKLAHOMA

ATOKA COUNTY

R. P. Whelan et al's No. 1 Howard, NW SE NW Sec. 6-4s-11 ..... Drlg. 330 ft.
Brookshire's No. 1 R. W. Rowland, NW NE SE Sec. 18-3s-10 ..... Shut down 400 ft.

BRYAN COUNTY

Bryan County Oil's No. 1 Childs, NW SE SW Sec. 7-7-10.. T. D. 650 ft.
Bush et al's No. 1 Commerce Trust, NE cor. Sec. 25-6s-9 ..... Drlg. 740 ft.

JEFFERSON COUNTY

Smith's No. 1 McCarty, SE NW NE Sec. 18-4s-8w ..... Location.
C. V. Chenault et al's No. 1 Grogan, SW NE SE Sec. 15-7s-8w ..... Shut down 1,065 ft.

LOVE COUNTY

Batson & Sterrette's No. 1 Dillard, SE NE NW Sec. 25-6s-3 ..... Show 5 bbls. 1,585-96 ft.; T. D. 4,433 ft.; P. B. to 1,604 ft.; pumping.
Holmes et al's No. 1 Flannigan, NW cor. Sec. 2-8s-1 .... Rig.

McCURTAIN COUNTY

The Oil Journal's No. 1 Parks, C NE NW Sec. 9-6s-23 .. Spudding.
Stewart's No. 1 Patterson, C SE SE Sec. 7-6s-24 ..... T. D. 300 ft.; shut down.

MARSHALL COUNTY

McCrory et al's No. 1 Little, NW SW Sec. 30-7s-6 ..... Bailing 10 bbls. of oil 495-97 ft.
D. H. Curry's No. 1 Ward, NE SE SW Sec. 15-5s-6 ..... Drlg. 2,170 ft.

WILDCAT OPERATIONS IN KANSAS

(Continued from Page 27)

MORRIS COUNTY

Urschel et al's No. 1 Bersuch, NW SE NW Sec. 10-17-7 .. Machine.
Hankerson et al's No. 1 Cessman, SW SE Sec. 24-16-9 .... Shut down 2,210 ft.

NESS COUNTY

Gypsy Oil Co.'s No. 1 Coleman, C SW NE Sec. 25-17-25w.. Fishing 4,690 ft.

NORTON COUNTY

Richards et al's No. 1 Colby, Sec. 17-4-21w ..... Rig.

OSAGE COUNTY

Briggs & Smith's No. 1 Wood, SE NW Sec. 21-14-15 ..... Shut down 1,525 ft.
Fields' No. 1 Usker, SE cor. Sec. 35-15-17 ..... Shut down 400 ft.

RAWLINS COUNTY

J. G. Durham et al's No. 1 Weaver, SE cor. Sec. 3-2-35w ..... Shut down 3,200 ft.

RICE COUNTY

Detrick & Langston's No. 1 Purcell, NW cor. Sec. 33-19-9w ..... Underreaming 12-in. csg. 1,265 ft.
McFadden and Shell's No. 1 Jennings, SW NE NW Sec. 29-18-6w ..... T. D. 1,450 ft.; plugging back to 1,130 ft.
Cress et al's No. 1 Sharp, SE NE Sec. 13-20-10w ..... Show oil 3,107-15 ft.; Silicious 3,330-36 ft.; estimated 1,500 bbls.; shut in.
Allison-Fitzwilliams' No. 1 Blake, NE NW Sec. 9-18-10w. Rig.

RENO COUNTY

Shell Continental's No. 1 Blake, SW SE SE Sec. 23-23-4w. Chat 3,267-3,308 ft.; 8,500,000 ft. gas; shut in.

ROOKS COUNTY

Empire Oil & Ref. Co.'s No. 1 Halsman, SW NE SE Sec. 17-7-20w ..... Drlg. 3,075 ft.

RUSH COUNTY

Dewey & Mitchell's No. 1 Greenawalt, C SW Sec. 17-19-16w ..... Drlg. 2,795 ft.

RUSSELL COUNTY

Hall et al's No. 1 Mills, SE SW SE Sec. 30-14-13w .. .. Show oil 2,902-08 ft.; drlg. deeper.
Agate Oil & Gas Co.'s No. 1 Rochfellow, SE cor. Sec. 6-13-12w ..... Shut down 3,374 ft.
Gilbreath et al's No. 1 Bratton, C NE Sec. 33-11-13w ... Show oil 3,090-94 ft.

SEDGWICK COUNTY

Buck et al's No. 1 McNananan, NE NW NW Sec. 2-29-1.. Shut down 2,440 ft.

SALINE COUNTY

Stanolind Oil & Gas Co.'s No. 1 Martin Com., NE SE SE Sec. 3-16-3w ..... Drlg. 2,855 ft.
Twin Mounds Oil Co.'s No. 1 Weis, C W half NE NW Sec. 20-13-4w ..... Shut down 2,700 ft.

SHERIDAN COUNTY

Flo et al's No. 1 Shoemaker, SE SW SW Sec. 27-7-26w .. Shut down 1,610 ft.

STAFFORD COUNTY

Rosenthal, Stanolind and Amerada's No. 1 Gray, C NE Sec. 11-24-13w ..... Drlg. 2,080 ft.

STEVENS COUNTY

Argus Prod.'s No. 2 Christopher, C NE Sec. 10-33-39w .. Drlg. 5,420 ft.

SUMNER COUNTY

Spencer et al's No. 1 Porter, NE SW Sec. 12-33-4w ..... Rig.
Otstot et al's No. 2 Marlow, C SE NW SE Sec. 22-33-3w .. Drlg. 1,465 ft.

WASHINGTON COUNTY

Sincox et al's No. 1 Penwell, NW SE NE Sec. 16-3-3 .... Shut down 1,720 ft.

SOUTHWEST TEXAS FIELDS

(Continued from Page 32)

Field. Zoch's gas well drilled in the early days of the field is 6 miles farther east.

Assuming that No. 38 Ray marks the eastern limits of the field, the pool is proven for a length of 2 miles east and west and a width of around half a mile or more. There is a jump then of a mile with the Cosden Pool consisting of half a dozen wells located a mile west, and two other producing spots, one a mile north of the Pettus Pool producing from two wells at about 2,900 feet and the other spot with two producing wells at 3,680 feet nearly 3 miles north of the Pettus Field. In this area the Gulf Coast Oil Co.'s No. 2 McKinney failed to find the 3,680-foot pay and is testing a new sand at 3,730 feet.

Miscellaneous Operations

There were some Edwards lime disappointments along the Balcones fault zone last week. Fritz Fuchs' No. 1 L. W. Fuchs in Williamson County in the W. Cartwright Survey topped the Edwards at 2,208 feet and was abandoned at 2,231 feet with the hole full of sulphur water. Marts and others' No. 1 Oswald in Travis County topped the Edwards at 1,270 feet and was abandoned at 1,406 feet with sulphur water. Also Fort Bend Oil Co.'s No. 1 Engleman in J. H. Denson Survey in Travis County topped Edwards at 980 feet and was abandoned at 2,087 feet.

Taylor Temple Oil Co. in Travis County got a little oil in serpentine, estimated at 2 bbls. a day of 38 gravity, at total depth, 850 feet. It topped the serpentine at 660 feet and is No. 1 Smith in the L. Kimbro Survey, 5 miles northeast of Manor. The amount of oil, though small, may lead to other drilling. No. 1 has been abandoned.

Still farther north in Falls County, E. W. Bateman abandoned his No. 1 Czaykowski in the John West Survey in the Edwards with total depth of 3,905 feet. It topped the Georgetown at 3,824 feet.

SOUTHWEST TEXAS PRODUCTION

Agua Dulce	38
Bexar County	314
Branyon	23
Bruner	12,019
Buchanan	80
Chapman	3,937
Dale	265
Darst Creek	19,804
Kingsville	121
Larremore	22
Luling	8,318
Lytton Springs	697
Manford	125
McMullen County	20
Medina County	22
Minerva	404
Mirando district*	14,016
Pettus district	7,145
Saxet	324
Somerset	1,311
Thrall	35
White Point	42
Yoast	120
Total Southwest Texas	69,202
Week ended May 16	68,123
Increase	1,079

*Includes Charco-Redondo, Jennings and Mirando Valley of Zapata County; Albercas, Aviator, Caroline-Texas, Mid-O-Juelos, Schott and Wolcott, Webb County; Alworth, Henne-Winch-Fariss and Randado, Jim Hogg County; Cole, Driscoll, Kohler, Schoolfield-D'Byrne and S.R.C.-Vacuum, Duval County; Mount Lucas, Live Oak County.

TEXAS PIPE LINE BILL PASSED

AUSTIN, Tex., May 23.—The legislature has passed a bill which permits two or more companies to pool their interests and construct an oil pipe line without securing a permit from the railroad commission.

GULF COAST FIELDS

(Continued from Page 34)

which were put into effect as a means of preventing as much waste of gas as possible. While only around 500 bbls. of high gravity oil production is affected, this action will mean the shutting in of approximately 200,000,000 feet of gas daily, a large part of which formerly was wasted. All other deep wells in the field, except where water conditions prevent, are being produced uniformly on quarter-inch chokes under rulings put into effect March 10. That action proved very beneficial, resulting in a material lowering of the gas-oil ratio from the deep sands but did not reduce the gas wastage sufficiently.

One deep sand well was completed at Refugio during the week, and, it being a "gasoline" well, was shut in. This was United Production Corp.'s No. 9 O'Brien, which set 18 feet of 5-inch screen in sand at 6,451-62 feet, with a pressure of 1,975 pounds on tubing and 2,100 pounds on casing through quarter-inch chokes.

Pierce Junction

Rio Bravo Oil Co. completed two wells at Pierce Junction, its No. 22-A Settegast, west flank, and No. 102 G. H. and S. A., northwest flank. The former flowed initially at the rate of 2,500 bbls. of pipe line oil daily, 500 pounds pressure through a five-eighths-inch choke, with 55 feet of 4½-inch screen at 4,255 feet, although since it has dropped off to 1,500 bbls. The northwest flank completion was a former producer deepened from sand at 4,441 feet to 4,835 feet. It made 420 bbls. daily.

Other completions included Vacuum Oil Co.'s No. 31 Miller, Lockport, 500 bbls. fluid, 30 per cent water, 560 pounds through a half-inch-choke; and Rio Bravo Oil Co.'s No. 115-A Cotton, 73 bbls., 475 feet. Five abandonments were reported.

McMILLAN INJUNCTION SUIT STARTS JUNE 24

HOUSTON, Tex., May 23.—Trial of the Macmillan Petroleum Corp.'s suit to halt, by injunction, enforcement of oil proration in East Texas was postponed until June 24 by a three-judge federal court.

It developed, it was said unofficially, that the hearing would require longer than had been expected and Federal District Judge Duval West and Randolph Bryant had not at present sufficient time to spare. Circuit Judge J. C. Hutcheson will head the court. The decision to continue the case was reached in a conference of the judges, in chambers.

The State Railroad Commission, whose proration authority is at issue, and the Macmillan corporation will take as many depositions as possible in the interim in the hope of reducing the amount of testimony that must be brought out at the trial.

The commission's answer to the petition for injunction, while admitting certain of the routine allegations, denied specifically others. Those denied included:

That the proration orders under fire were issued "pursuant to illegal agreement in violation of the Sherman antitrust laws."

That the corporation under proration would lose its investment because lessors would take action "for failure to develop."

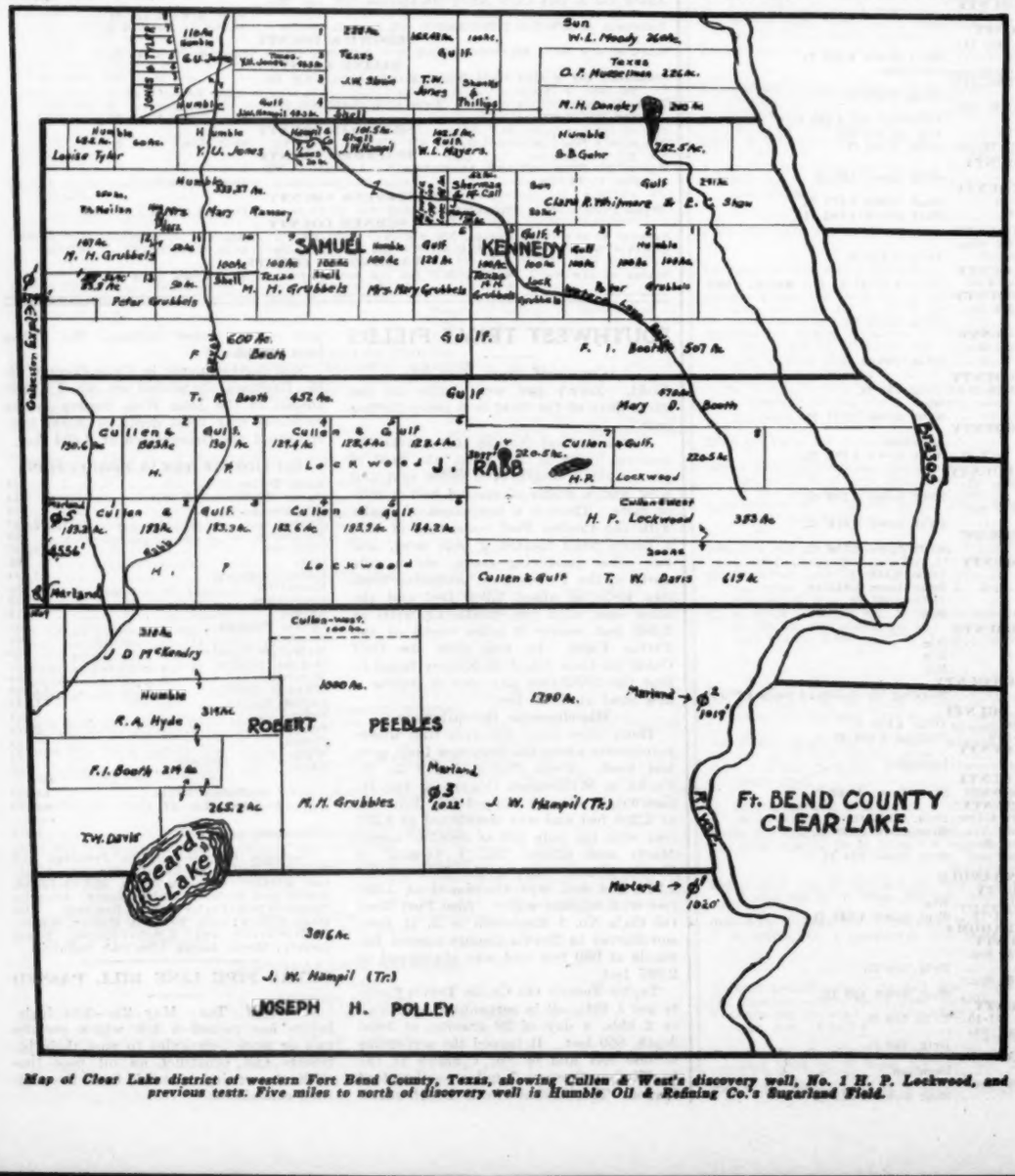
That Railroad Commissioners C. V. Terrell and Lon Smith had an "agreement" with "certain oil producers" before issuing the proration orders and that the agreement was "for the purpose of regulating and controlling the output, price and market of crude oil."

The answer also took up specifically and denied the Macmillan claim that it was so operating as to prevent waste.

J. D. CLARK, AUTHOR OF BOOK ON SHERMAN ACT

John D. Clark, who several years was actively engaged in the oil business as an official of the Midwest Refining Co., is the author of a book just released by the Johns Hopkins Press, Baltimore, Md., entitled "The Federal Trust Policy." Mr. Clark resigned his position with the Midwest company and after taking postgraduate work at Johns Hopkins University became professor of economics at the University of Denver.

The study, based upon the Sherman act, has been written because the author, as a result of extensive experience as a lawyer and business executive, was persuaded that the antitrust laws would soon become the subject of renewed interest. The study is brought up to date, containing happening having bearing on the Sherman act early this year.



Map of Clear Lake district of western Fort Bend County, Texas, showing Cullen & West's discovery well, No. 1 H. P. Lockwood, and previous tests. Five miles to north of discovery well is Humble Oil & Refining Co.'s Sugarland Field.

CALIFORNIA FIELDS

(Continued from Page 40)

The Continental Oil Co. has not yet concluded development work on No. 24 Selover, a deep test in the Seal Beach Field of Los Angeles Basin at 9,054 feet. This well failed to show sufficient gas pressure to result in a natural flow and the company has been obliged to install a compressor. Upon completion of this work it is believed that the well will be good for approximately 500 bbls. per day, although artificial stimulation will be required. The Chanslor-Canfield Midway Oil Co. concluded drilling operations on its deep test midway between the Rincon and Ventura Avenue Field at 10,034 feet and this project is being prepared for an early production test. The outcome of work on this well is expected to be determined some time during the coming week. The Birch Royer Oil Co. is also completing preparations for a production test on a deep well, although this project, No. 2 Maricopa, at Midway-Sunset in Section 7-11-23, is only down 9,001 feet. It has just been passed for production and swabbing operations are now under way.

Ventura Avenue Field

The Shell Oil Co. finished a new well in the Ventura Avenue Field during the past week, although this new well, No. 60 Taylor, did not equal the initial daily production of previous completions. It was good for only 720 bbls. per day from the deep zone at 7,197 feet. Drilling operations in the Ventura Avenue Field have declined to a new low point due to the recent completion of about 10 wells in a period of five or six weeks. Both the Associated and Shell, however, are starting new wells in this field but they will proceed slowly with future development work. The Merchants Petroleum Co. has resumed drilling operations in No. 1 Cochran, which was recently given a preliminary production test at 1,285 feet. This well, located in the Sespe region of Ventura County in Section 1-4-20, made 248 bbls. of 22.2 gravity oil per day on a pumping test and it is the opinion of the company that production will be stimulated by the addition of a little more hole. The Oakburn Oil Co. has succeeded in bringing No. 1 Sperry, a tideland project on permit No. 169, under control following a blowout of more than a week's duration. This well came in flowing approximately 5,000 bbls. of salt water per day from 2,821 feet. The General Petroleum's No. 10 Erburu, which, like the Oakburn's No. 1 Sperry, is in the Capitan Field of Santa Barbara County, blew in flowing gas during the early part of the week. The well was being swabbed for a water test when the blowout occurred, and, although the gas from this well became ignited, it was subsequently extinguished after having occasioned a minor loss. The rig and drilling equipment was only slightly damaged, although one of the crew suffered some rather severe burns.

Town Lot Drilling

Wildcatters and operators holding acreage in prospective town lot areas, especially in Los Angeles Basin, are engaged in a last-minute rush to get under the gun before the recently enacted Senate Bill No. 363 becomes effective. This bill, it will be recalled, prevents the drilling of any new wells in town lot areas within 100 feet of a thoroughfare or within 150 feet of the nearest rig. This has resulted in the staking of an abnormal number of locations in prospective town lot areas in southern California which may possibly be proven up previous to the time at which the new law goes into effect. This has become especially pronounced in the Sunset Beach area and also in the Hermosa Beach district where one or two wells have shown favorable symptoms. In the latter area both the Carniel Oil Corp. and the Hermosa Exploration Co. are concluding exhaustive production tests. There was no great change in the status of development work in the Huntington Beach town lot section during the past week, although the Superior Oil Co. landed water strings in No. 1 Eberle and No. 2-7 Gillette. It is interesting to note that

the 9-inch water string was landed and cemented in the former well at 7,177 feet, while pipe was landed in the latter at 6,990 feet. The Republic Petroleum has foundation in for a new rig in this area and derrick construction is expected to get under way within the next few days. The Wilshire, anticipating the initiation of intensive development in the Huntington Beach town lot area, rigged up rotary equipment in Nos. 5 and 6 on its Huntington lease and rewired four other wells preparatory to a resumption of drilling. The failure of W. E. McCaslin to pick up the Superior zone in his No. 17 Transport has had a tendency to take the edge off some of the enthusiasm which has been manifested in this area since the original deep zone discovery of the Superior several months ago. The well log of No. 17 Transport indicates the probability that this well is drilling straight down the fault and therefore has little chance of resulting in commercial production unless it drills through the fault and ultimately picks up the oil sand at a lower depth. This area, however, will bear watching as wells somewhat removed from this fault have shown satisfactory indications.

MICHIGAN FIELDS

(Continued from Page 40)

feet a day was struck in the Antrim shale. The gas sand will be shot.

Muskegon County

H. and W. Feicke's No. 1 Feicke, located several miles north of the proved Muskegon Field, is shut down as the only wildcat drilling project in the county. Drilling is to be resumed next week following a conference of interested Chicago backers of the well.

Rig has been moved from Buchanan and Frye's No. 1 Fruitvale Rest Co. well in Section 6, Blue Lake Township, which is now on the pump, to a new location in the vicinity of the Fruitvale Lot & Land Owners' No. 1 C. J. Sipple well. Permit for a new wildcat in this vicinity about 20 miles north of the Muskegon Field is expected to be obtained within the next week or 10 days.

Allegan County

Drilling has been resumed on H. P. Manion's No. 2 John Tobin, SE NW Section 16-2n-13w, Allegan Township, Allegan County, as the result of the recent starting of a new well within the Allegan city limits by G. C. Irvine of Muskegon. Both wells are drilling this week and both are expected to penetrate the upper Traverse formation in the near future.

OKLAHOMA FIELDS

(Continued from Page 26)

cor. SW NE Section 3-8-5, found the Hunton lime at 3,971-4,064 feet, with a showing of oil. The tests are located in the northwest extension area of the Carr City Pool.

In Eastern Oklahoma

Operations are active in the eastern part of the State where oil and gas is found in shallow horizons. In the Muskogee area the following developments were under way: Braman Oil Co.'s No. 5 Jackson, CSL SW SE NW Section 17-13-16, in the South Boynton Field, was drilling at 1,075 feet. Same company's No. 1 fee, SE cor. NE NE Section 18-13-16, was drilling at 1,120 feet. W. E. Wineland's No. 1 Jackson, SE cor. NE NW Section 17-13-16, was spudding. E. W. Ladd's No. 1 Grayson, CNL NW NW Section 29-16-15, in the Haskell Field, was drilling at 820 feet. Mack Drilling Co.'s No. 6 Richards, SE cor. NE SE NE Section 33-16-15, was drilling at 520 feet. P. Boyle's No. 1 Barnett, NW cor. SE NW Section 35-16-15, was shut down at 1,258 feet with the tools lost in the hole.

In the Quinton gas field in southeastern Oklahoma one gas well was completed during the week. Choctaw Gas Co.'s No. 1 Louvier, NE cor. SE NE Section 8-17-18, Pittsburg County, was making 4,000,000 feet of gas from sands at 1,752-1,800 feet, but was drilling deeper. Mid-Western Oil & Gas Co.'s No. 1 Mattock, C NW SE Section 8-7-18, was drilling at 1,520 feet and expecting the gas sand in the next 100 feet. Utilities Production Co.'s No. 2 Vail, NE cor. SE SE Section 8-7-18, found a dry sand at 1,772 feet and was drilling in the sand at 1,880 feet with nothing showing. Same company's No. 3 fee, SW cor. NW SW Section 9-7-18, is a new location.

In the Tiger Flats district of Okmulgee County, Eagle-Picher Mining & Smelting Co.'s No. 1 Marshall, NE cor. SE SW Section 27-12-12, an old well, is being drilled deeper to test the Wilcox sand horizon. On the last report the test was at 2,700 feet. The old total depth was 2,656 feet. In the Bald Hill district of Okmulgee County, Denton and Marshall's No. 2 P. Rentie, NE cor. NW SE Section 5-14-14, was drilling at 1,670 feet.

In Western Fields

The Comar Oil Co.'s No. 1 Babstick, SE cor., Section 18-22-5, a wildcat in Pawnee County, was drilling at 3,365 feet with the 9-inch casing cemented at 3,138 feet. An attempt is being made to unitize the surrounding acreage before proceeding with the drilling of the wildcat test. The Comar Oil Co. owns most of the acreage with the exception of a few tracts within a mile of the test. The unitizing of the acreage south of the test is under way. The Comar Oil Co. is owned jointly by the Continental Oil Co. and Shell Petroleum Corp. Other companies owning acreage in the vicinity of the test are: Twin States Oil Co., Gypsy Oil Co., Skelly Oil Co., Magnolia Petroleum Co. A showing of oil was found in the Bartlesville sand at 3,157-3,298 feet. Standard tools were rigged up after the 9-inch casing was cemented.

The following operations were under way in Noble County: Magnolia Petroleum Co.'s No. 2 Young, SE cor. SW NW, Section 22-21-2w, rigging up standard tools at a total depth of 4,900 feet, reported to be running favorably on structure; same company's No. 1 Hoffman, SW cor. SE SE, Section 16-21-2w, drilling at 4,200 feet; same company's No. 2 Sumner, SE cor. NW, Section 4-20-1w, southwest of Perry, drilling at 1,600 feet.

Mid-Kansas Oil & Gas Co. and Ramsey Petroleum Corp.'s No. 1 Heitholt, NW cor. SE SE, Section 33-24-3w, Garfield County, may be abandoned. The test was drilled to a total depth of 5,092 feet and plugged back to 4,780-4,850 feet where it was shot with 100 quarts and was showing 10 bbls. of oil and a like amount of water while cleaning out and testing. The owners may not pump the well.

Kay County operations were as follows: Boucher Oil Co.'s No. 1 Jefferson, NE cor. SW, Section 32-26-1w, is temporarily shut down at 4,615 feet in the Mississippi lime.

J. S. Pine's No. 2 Ogg, NE cor. SW SE, Section 35-25-1w, is also shut down after spudding. It is located in the Tonkawa area.

Southern Operations

In the shallow area near Kingston, in Marshall County, in the southern part of the State, McCrory & McCrory's No. 1 Little, NW cor. SW Section 30-7s-6, was being recemented in an attempt to shut off the water which is believed to be coming from behind the casing. The well has been making about 25 per cent water and 110 bbls. of oil in 24 hours. The operators have been unable to definitely determine the source of the water and it will again be cemented in an effort to eliminate the water. The well extends production a half mile in the area.

Hearle-Hudson's No. 1 Williams, SW cor. SE NE Section 24-7s-5, Marshall County, was spudding and it is expected to cement surface pipe in a few days. It is located about a mile from production in the area. In Love County, Batson, Starritt & Autry's No. 1 Dollard, C SE NE Section 25-6s-2, was cleaning out to the top of the sand at 1,586-96 feet, and expects to start pumping in a few days. Same operators' No. 2 Autry, SE cor. NE Section 27-6s-2, was drilling at 375 feet in lime. One well was completed in the Tatums Pool. Amos. Drilling Co. and W. H. Gant's No. 1 Sparks-Hooks, SE cor. Section 13-1s-3w, Carter County, cemented casing at 1,945 feet after finding showings of oil in sands at 1,946-87 feet, 1,987-2,042 feet, and 2,042-2,106 feet, with the total depth of 2,110 feet. It made 612 bbls. of oil the first 24 hours.

K. D. Oil Co. and F. Gouin's No. 1 Burton, C SW NW Section 30-1s-2w, about a quarter of a mile south of production in the Tatums Pool, was rigging up rotary tools.

Established Potentials

The following Oklahoma City wells established new potentials during the week. A comparison with the January and April gauges is listed below:

	April	June
Indian Territory Ill. Oil Co.:		
No. 2 L. Farley	503	None
No. 1 Capshaw	886	None
Tom Slick Oil Co.:		
No. 1 Harrison	1,574	3,080
No. 1 Rodman	928	1,253
Wilcox Oil & Gas Co.:		
No. 1 Short	12,015	None
Phillips Petroleum Co.:		
No. 1 Winstead	19,014	None
No. 1 Hatcher	3,744	None
No. 1 Crean	25,458	None
Prairie Oil & Gas Co.:		
No. 1 Hiddleston	972	270

Greater Seminole Production

The production from the Greater Seminole area for the week ending May 21, was approximately 190,391 bbls. The first 12 pools listed below comprise the Seminole area, which averaged approximately 137,110 bbls.

Pool—	Bbls.
Little River	25,325
East Little River	5,945
Carr City	14,425
Maud	2,510
Mission	9,570
Bowlegs	15,600
Earlsboro	19,300
South Earlsboro	5,050
East Earlsboro	19,175
Seminole	14,000
East Seminole	1,760
Searight	4,550
Total Seminole Field	137,110
Allen	11,327
Asher	657
Wanette	6,912
Konawa	7,998
Sasakwa	2,537
St. Louis Pearson	23,350
Grand total	190,391

Oklahoma City Shipments

The total shipments from the Oklahoma City Field for the week ending May 23, were 1,114,877 bbls. of oil. The shipments by companies were as follows:

Company—	Bbls.
Champlin	6,629
Empire	256,626
Magnolia	5,315
Oklahoma	118,357
Operators	32,706
Prairie	9,805
Shell	82,326
Sinclair	356,920
Stanolind	200,884
I.T.I.O.	7,545
Tidal	17,489
Anderson-Prichard	2,115
Century	6,784
Petroleum P. L.	6,871
Crude Oil P. L.	4,505
Total	1,114,877

The daily production and pipe line shipments from the Oklahoma City Field for the week ending May 23, were as follows:

Day—	Production	Shipments
May 17	130,867	167,023
May 18	114,501	155,519
May 19	164,988	163,733
May 20	133,768	170,653
May 21	153,078	152,297
May 22	142,244	157,484
May 23	154,401	148,168
Total	992,847	1,114,877

Atoka County

Edgerton and others moved a machine in for No. 2 Rolland ranch, SE cor. NE. Section 6-1-15. No. 1 Rolland ranch, C NW, Section 9-1-15, has been abandoned at 1,030 feet.

Coal County

Mid-Western Oil Co.'s No. 2 Gum Brothers, CEL W half SW NW, Section 30-3-10, made 1,500,000 feet of gas in sand 1,490-98 feet.

Creek County

Magnolia Petroleum Co. has the rig up to deepen No. 8 Boone, C N half SW SE, Section 34-17-7. Cal Cul Oil Co. made location for No. 1 Holleyman, SE cor. NE SE, Section 18-14-7.

Muskogee County

Roy Reed and others' No. 1 Stidham, NE cor. NW NE SE, Section 8-15-18, is preparing to deepen from 960 feet. G. S. Wilson's No. 1 Lewis, CSL NW NE, Section 12-15-15, has been abandoned at 935 feet. Braman Oil Co.'s No. 1 Brown, SE cor. NE NE, Section 18-13-16, made 1,000,000 feet of gas from sand 1,428-44 feet.

Murray County

C. P. Williams' No. 1 Williams, CNL NE NE, Section 21-1-4, is drilling at 564 feet.

Latimer County

Limestone Oil & Gas Co. moved the rig in for No. 1 Thurston, C SW NE, Section 15-5-18.

Lincoln County

Magnolia Petroleum Co.'s No. 1 Wagner, NW cor. NE, Section 18-14-4, has been completed for 2,348 bbls. in sand 4,958-71 feet.

Okmulgee County

Shamblin & Smith's No. 1-A Sharp, SW cor. SE, Section 31-16-12, is rigging up. McDonald and others' No. 2 Tiger, NE cor. SE SE, Section 24-16-13, is rigging up. Eagle Picher Lead & Zinc Co.'s No. 1 Mitchell, NE cor. SE SW SE, Section 27-12-12, is drilling at 2,680 feet. D. M. Logan's No. 1 Pigeon, SE cor. NE, Section 31-15-13, has been completed for 6,000,000 feet of gas in sand 2,005-21 feet. R. E. Burks' No. 2 A. Howard, SW cor. NE SE, Section 17-15-14, is dry and abandoned at 1,987 feet. Whitcomb and others' No. 6 Harris, SW cor. NE NE, Section 1-14-14, has been completed for 10 bbls. in sand 1,082-97 feet. W. L. Varner's No. 1 Butler, NW cor. SE SE, Section 16-12-14, made 500,000 feet of gas from sand 600-97 feet. Jordan and others' No. 2 Anderson, SW cor. NE NE, Section 28-12-14, has been completed for 500,000 feet of gas in sand 560-692 feet.

Oklahoma County

T. B. Slick estate made location for No. 3 Central, NW cor. SE SE SE, Section 3-11-3w, Oklahoma City Pool. Location was made for No. 4 Central, Lot 29, Central Addition, SW cor. NE SE SE, Section 3-11-3w. Dengail and Carolyn and others' No. 1 Ransom, SE cor. SW NW, Section 10-11-3w, has been completed for 2,887 bbls. in three hours from Wilcox sand topped at 6,520 feet, total depth 6,650 feet.

Osage County

The Prairie Oil & Gas Co.'s No. 1, SW cor. NW NW, Section 16-25-8, has been abandoned at 2,523 feet.

Pittsburg County

Utilities Production Co. has the rig up for No. 4 Carney, SW cor. NW SW, Section 9-7-18.

Seminole County

Gwin and others' No. 1 Earls, NE cor. SE NW, Section 33-9-6, is dry and abandoned at 4,246 feet.

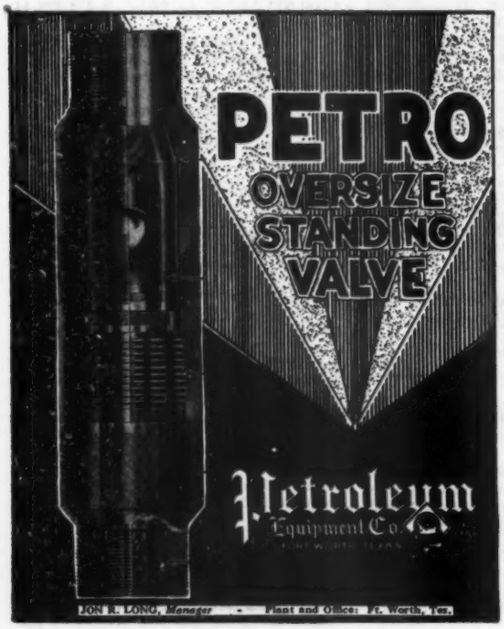
TEST TAXATION ON OIL EMPLOYES' STOCK

NEW YORK, May 23.—George W. Davis, counsel for an employe stockholder, argued an appeal in a test case before the United States Circuit Court of Appeals, to determine whether employes of Standard Oil Co. of New Jersey who purchased stock under the company's installment plan, must pay income taxes on the increased value of such stock. Decision was reserved.

In 1920, Walter Schaefer, an employe of the company, purchased stock from the company in all $6,308, to which the company added 50 per cent or $3,154. During the period in which he was paying for the stock, dividends, interest and other accruals amounted to $1,142. Schaefer paid an income tax on the amount the company contributed, plus accruals, totaling $4,296. The Government, claiming the stock increased in market value $2,823 during the period he was paying for it, levied an additional tax of $142, which was paid under protest. Schaefer brought suit in federal District Court for a refund and a verdict was returned in his favor. The Government then filed an appeal.

Mr. Davis contended that "Congress never intended to burden employes who might take advantage of offers of large corporations to assist them in the purchase of stock," while counsel for the Government argued that the tax was based on market value of the stock and was a protection in the event of a losing market.

Counsel for the Government, in the event of an adverse decision, will bring the case before the United States Supreme Court.



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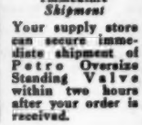

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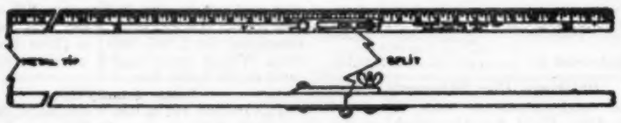

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TWELVE MILLION-FOOT GASSER IN CORNING AREA

(Continued from Page 38)

yet untapped, produce as liberally as the two anticlines which have shown so favorably in the Tioga and Wayne Fields.

Thus far the amount of gas being used from the Tioga and Wayne-Dundee-Altay Fields is negligible. For more than a year an oil pipe line has been carrying gas from Altay to the Binghamton gas works. This gas has not been sent in sufficient quantity to be furnished to the consumer as pure natural gas, and has been mixed with artificial gas manufactured at Binghamton.

A relatively small quantity of gas from the No. 1 Palmer and No. 2 Palmer wells in Tioga County is being distributed to neighboring towns and to Elmira. In this city it is mixed with artificial gas in the ratio of about one-third natural gas to two-thirds artificial gas.

The Lamoka Power Co., which is operating in the Wayne Field and brought in the Bigelow well with a capacity of 10,000,000 feet on February 27, 1931, announced on April 8 of this year that it was prepared to furnish the Associated Gas & Electric Corp. of Rochester with sweet gas for that city, but as yet negotiations between the two firms have come to no conclusion so far as the general public knows.

Gas company officials are reluctant to reveal their plans for distribution, and only major distributing operations thus far announced is the plan of the Lycoming Natural Gas Co. to lay an 80,000,000-cubic-foot line from Tioga County to Syracuse.

List of Wells

Wells in the two fields listed as producing are as follows:

Tioga County, Pennsylvania: No. 1 Palmer, owned by the Allegany Gas Co., 12,000,000 feet a day.

Penn-United Gas Co.'s Meaker well, 66,000,000 feet.

Lycoming Natural Gas Co.'s No. 1 Farr, 14,000,000 feet.

Lycoming Natural Gas Co.'s No. 1 E. W. Close, 25,000,000 feet.

Allegany Gas Co.'s No. 2 Palmer, 20,000,000 feet.

Lycoming Natural Gas Co.'s No. 1 Boom, 20,000,000 feet.

Wayne-Dundee-Altay: The following wells owned by the Belmont Quadrangle Corp., averaging from 4,000,000 to 7,000,000 feet: Emmett Pulver, Roy Littler, Charles Losey, No. 2 Pulver, Hobart Beyen, Charles Travis, James Mulloy, William Glenn, Michael Galek, David Littell, Berlyn Gardner, Mrs. A. Waddell, Ray Kelly, George Sproul and Edward Lousey. These wells are all in the Dundee Field.

Bigelow, Wayne, Lamoka Power Co., 10,000,000 feet.

Mary Gordon, Wayne, Stone Oil & Gas Co., 2,000,000 feet.

No. 1 Deming, Dundee, Belmont Quadrangle Co., 2,000,000 feet.

Dencenberg, Bath, Cunningham Gas & Oil Co., 2,000,000 feet.

No. 1 Houck, Wayne, Cunningham Co., 7,000,000 feet.

Turner, Wayne, Crescent Production Corp., 4,500,000 feet.

Olzewieski, Wayne, Wittmer Oil & Gas Corp., 12,500,000 feet.

Weiss, Wayne, E. J. DeGolier, 10,000,000 feet.

Earnest, Wayne, Olean Finger Lakes Gas & Oil Co., 3,000,000 feet.

Seth Allen, Altay, F. A. Hughey and George Walters, of the International Salt Co. of Watkins Glen, 4,000,000 feet.

Swarthout, Wayne-Dundee, J. C. Cunningham Co., 3,500,000 feet.

Oriskany Drilling Co.'s No. 1 John Faucett, 4,000,000 feet.

Frank Gasper, Wayne, Belmont Quadrangle, 5,500,000 feet.

KANSAS FIELDS

(Continued from Page 27)

wells in the Ritz-Canton Pool, and the Decker Pool, both located in McPherson County, by Umpire Lloyd Pickrell. Operators are preparing the wells for the potential tests. A few of the wells on which potentials will be taken are Syndicate Oil & Gas Co.'s No. 1 Becker in Section 36-19-2w; Lario Oil & Gas Co.'s No. 1 Lagree in Section 31-19-1w, and same operator's No. 1 Suffield in Section 25-19-2w, all producing from the Viola lime formation. Some of the other new wells are producing from the chat formation.

Cowley County

Fine and others' No. 1 Wallace, SW cor., Section 28-32-4, is spudding. Blankenship Petroleum Co.'s No. 2 Sloan, SW cor. NW NW, Section 28-30-3, has been abandoned at 3,002 feet. Sooby and others' No. 1 Bauman, NE cor. SE, Section 8-32-5, has been completed for 213,000 feet of gas in sand 710-18 feet.

McPherson County

McPherson Oil & Gas Co. and Shell Petroleum Corp. made location for No. 2 Wallace, C NW SW, Section 12-19-2w. Location was also made for No. 2 Giffin, C SW NW, Section 14-19-2w. Stearns & Streeter and Derby Oil Co. staked location for No. 1 R. Chinberg, SE cor. NW NW, Section 15-19-2w. Lario Oil Co. and Shell Petroleum Corp.'s No. 3 Suffield, NE cor. SE, Section 25-19-2w, is moving in rig material. Olsen and Shell Petroleum Corp. made location for No. 3 Koehn, SW cor., Section 36-19-2w. Harris & Haun and others' No. 1 Overman, NW cor. NE SE, Section 20-19-1w, is moving in. Magnolia Petroleum Co. made location for No. 1 Klassen, NW cor. NE NW, Section 21-19-1w. Mohawk Oil Co. and others made location for No. 1 McGill, SW cor. NE, Section 7-20-1w. Dickey Oil Co. and Shell Petroleum Corp.'s No. 1 Decker, SE cor., Section 35-19-2w, has been completed for 3,361 bbls. in 12 hours from chat 2,935-68 feet. Gypsy Oil Co.'s No. 2 E. Stuckey, NE cor. SW SE, Section 33-20-3w, was deepened from 3,290 feet to 3,356 feet in Silicious lime and made 695 bbls. in 17 hours.

Rice County

J. R. Robertson is building the rig for No. 1 Rainey, SW cor., Section 3-21-6w.

Sedgwick County

Shell Petroleum Corp.'s No. 7 Fisher, NW cor. SE, Section 15-26-2, is moving in to deepen from 2,916 feet.

Stevens County

Texas Interstate Pipe Line Co. and others' No. 1 Stuart, C SE, Section 12-34-38w, has been completed for 6,048,000 feet of gas in sand 2,610-2,805 feet.

CANADIAN FIELDS

(Continued from Page 36)

crude in the Benton shales at 3,680-3,776 feet, with aggregate potential production around 62 bbls., the test is deepening for larger production. The next potential oil horizon is the Sunburst. The test is below 3,820 feet.

In the same area, Nordon Corp. is reported having made tentative arrangements with United States interests for a deep test on its Keho acreage. Lethbridge and Calgary interests are reported to have "blanketed" practically the entire area of Keho Lake itself, and are reported planning an under-water test in the bed of the lake.

In the Lethbridge district, Texas-Imperial's No. 1, LSD 14, Section 22-8-22w4, is drilling in shale at 2,684 feet with 12⅜-inch hole.

Spring Coulee Wildcat

On the Spring Coulee structure, Alberta Pacific Consolidated's No. 1, Section 15-4-23w4, at 6,190 feet, got a strong flow of sulphur water which rose to within 700 feet of the top and could not be lowered by bailing. Later, the bailer was lost, and it was decided to plug back and shoot the upper oil strata. This work was being started when a strong flow of gas developed coming from the bottom hole. Further efforts are being made to shut off the water and test this new production.

Test at Taber

In the Taber district, Alberta Pacific Consolidated's No. 1 Cole-Hunter, LSD 3, Section 11-10-17w4, is reported drilling around 3,331 feet. If occult yarns have anything to do with the success of oil tests, the Taber well should make new oil history. There are at least three different traditions told by Taber people to indicate their district is a potential oil field. One is related by W. B. Grubb,

J. P., who came west in 1882. In the seventies Grubb was at Detroit and for amusement decided to have his fortune told. The woman clairvoyant, after accurately telling him of various episodes in his past or immediate future, went into a trance and said: "Go to the old house at the river, go to the front door, go to the back door and look out. There it stands, the big lone tree. Dig down there, there is oil." Grubb went west and pretty well forgot the episode when one day, escorting a geologist through the Taber country, the young man told him there was a "fault." A little later he had a "hunch" to go up the river, and, driving up with two companions, at a point northwest of Chin they came on a deserted house, went in the front door, went out the back door, and saw a big tree standing alone. No drilling resulted, however, but the location is not too far from the present Taber wildcat.

Another clairvoyant yarn involves a touring mind-reader, Mem O'Rea, who visited Taber in the drouth years. The clairvoyant, though he had never actually seen the spot, described a double turn in the river about 3 miles northwest of the town. "Someone should drill for oil near this V," he said. "If you Canadians don't, someone else may be ahead of you." The Taber wildcat is located at practically the point indicated.

Another story is that years ago, before any oil excitement started in Montana or southern Alberta, Bishop Harris in a dream saw a column of oil rising from the ground near the coulee back of the Harold Harris farm.

Red Coulee Field

On the Alberta end of the international Red Coulee structure, Southern Alberta Exploration Co.'s No. 2, Section 3-1-16w4, is drilling considerably below 2,260 feet, and close to the producing sands. To the northwest, Dalco Oil & Gas Co.'s No. 2, LSD 7, Section 19-2-17w4, is drilling close to the Sunburst sand.

Parco Oil Co., operating subsidiary in Canada for the Producers & Refiners Corp. of Wyoming, is reported moving drilling equipment and casing to the Shank Lake area, where a commercial test will be drilled. The company has done considerable structure testing. The location will be in Township 1-20w4, some distance west of the proven Red Coulee Field.

Drilling in the Foothills

On the Pincher Creek structure, in the southern foothills, Alberta Gas & Fuel Co.'s No. 1 Yarrow, LSD 16, Section 34-3-30w4, is reported resuming after cementing at 4,500 feet. Alberta Pacific Consolidated's No. 2 Weymarn, LSD 5, Section 7-6-1w5, is drilling below 2,630 feet after setting 8-inch casing at 2,575 feet.

On the Watson structure, Raven Oils' No. 1 has derrick up and is moving in drilling equipment.

On the Monarch structure, west of Olds, Cartier-Majestic's No. 1, LSD 3, Section 36-31-7w5, is drilling below 200 feet.

Graystone Consolidated, Ltd., recently formed through a merger of Signal Hill Oil Co. and Popular Oils, Ltd., is reported preparing to resume work on Signal Hill's No. 2, LSD 9, Section 34-23-5w5, on the Moose Mountain structure. The new company now holds 16,00 acres. Signal Hill's No. 2 has been standing at 4,165 feet.

Ribstone Field

Ribstone Oils, Ltd., has commenced shipments of crude from the Ribstone Field in eastern Alberta, taking production from the three Meridian wells and Imperial Oil's No. 2 Ribstone. Production is sold to the Canadian Pacific Railway and the oil will be used for fuel in the mountain type oil burning locomotives of the company. Drilling of two new wells is now under way.

Mirror Landing Test

A new field of wildcatting is the Mirror Landing district on the Athabaska, close to the northern Alberta boundary. Crudome Oils, Ltd., of Toronto, is preparing to start its No. 1 test in this area. J. H. McCorkindale, field superintendent, returned recently from an inspection of the company's holdings of 32,000 acres. The lease is on the bend of the Athabaska River. It is hoped to start No. 1 test in June. The field looks like a shallow drilling proposition, and the first well will likely be completed this summer. The company has an option on a new gasoline refining process which it is planning to utilize in handling production.

Ontario Drilling

In the Dawn Field, Lambton County, Ontario, Union Natural Gas Co.'s No. 58, SW, Lot 11, Concession 1, Dawn Township, is drilling around 1,950 feet without a show, and looks like a dry hole. Union's No. 59, NW, Lot 24, Concession 2, is drilling around 1,200 feet.

In Haldimand County, Union Natural Gas Co.'s No. 194, Lot 22, Concession 7, Walpole Township, is drilling close to the sand and will finish in a few days. Union's No. 200, SE, Lot 21, Concession 2, Walpole, is drilling. Union's No. 202, SE, Lot 9, Concession 5, Rainham Township, is drilling.

In Norfolk County, Union's No. 201, NW, Lot 19, Concession 5, Woodhouse Township, is drilling.

In Mosa Township, Middlesex County, Southern Ontario Gas Co.'s No. 8, SE, Lot 14, Concession 3, got a gas flow, estimated around 100,000 feet at 1,550 feet, and is reported shut in. Earlier tests got small gas shows in this horizon, while two, Nos. 1 and 7, went deeper to get the only commercial production in the field. No. 8 shows what looks like the largest production yet struck in the upper sand, and will probably be finished at this depth.

In Kent County, the Southern Ontario Gas Co.'s test in SW, Lot 10, Concession 12, Tilbury East Township, finished in the Tilbury sand around 1,375 feet with a production of 20,000 to 25,000 feet. A shot increased this to around 50,000 feet.

In the D'Clute Field, farther east, in the south end of Raleigh Township, no drilling has been done this season by the Union Natural Gas Co. though it is expected that some work will be done later. American Engineering Co.'s No. 4, which finished dry, has been plugged and abandoned, and the outfit moved to Kingsville, in Essex County, where it will be used for repairing and cleaning out some of the Bon Jasperson gassers.

St. Lawrence Valley Report

While some work is in prospect for the St. Lawrence Valley area in Quebec, geologists do not seem to agree on the prospects. A geologist who recently visited the area and examined the logs of some of the old drilling tests sums up his views as follows:

"The line of igneous intrusives which extends eastward from Montreal is probably to be considered as unfavorable for the region in that immediate vicinity. These intrusives are younger than the sedimentary rocks. In many places these intrusives are known to be accompanied by igneous dikes which branch off at various angles from the main mass. Igneous dikes were encountered in several wells near St. Hyacinthe where there was no indication of them at the surface. These igneous intrusives would probably cause fracturing of the sedimentary rocks prior to intrusion and would thus provide avenues of escape for any oil or gas which might be contained in that vicinity.

"The most promising wells so far drilled in the St. Lawrence lowlands have yielded gas only, and with a maximum capacity measured in a few thousands of feet per day. It cannot be said that the chances of finding oil or gas in commercial quantity in the St. Lawrence lowlands of Quebec are favorable."

Operators Oppose New Rules

A deputation from the Oil & Gas Association of Alberta is conferring with Premier J. E. Brownlee and R. G. Reid, minister of mines, with reference to the regulations recently promulgated in regard to oil and gas development in the province. The delegation includes R. J. Hutchings, H. H. Greenfield, J. H. McLeod, W. C. Fisher, R. Van A. Mills, Dr. T. B. Williams and B. F. Hake. Operators are urging that no government royalty be imposed at present on oil production and that a definite maximum figure for the ultimate royalty be set; that allowance for drilling credits include cost of core drilling and geological work; and that an appeal to the courts be allowed from decisions of the minister of mines. A number of other modifications will be suggested.

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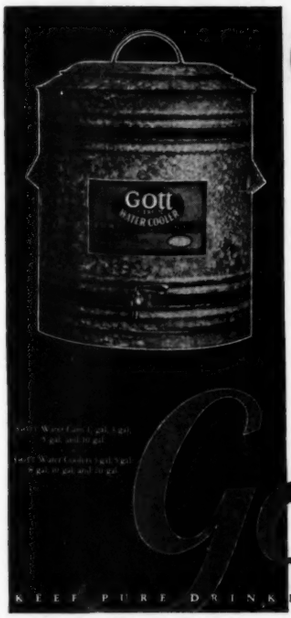

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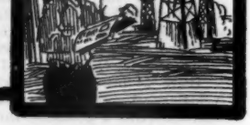

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WANTED TO BUY, Used Seamless casing all sizes. Give location, quantity, condition and price.
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Attention: Mr. A. A. Buschow. LD-59.

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Attention: Mr. A. A. Buschow. L.D. 59.

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ROYALTIES—PRODUCTION

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TURN TO PAGE 103 FOR ADDITIONAL CLASSIFIED ADS.

Chicago Market Now on Upward Trend

Poor Motoring Weather Hampers Improvement. Trade Interested in "Octane Numbers." Third Rate Gasoline Slows Traffic

By Robert C. Conine
Chicago Bureau, The Oil and Gas Journal, 6 North Michigan Ave.

CHICAGO, May 25.—The refinery's contribution to the third-grade gasoline marketing campaign, U. S. Motor specifications fuel, is now generally agreed to have reached the bottom in price when it went to 2¾ cents two weeks ago. The situation in the gasoline, naphtha and natural gasoline markets today clearly indicates that strengthened positions, with marked upward trends, were scheduled only to be forestalled by an inconsiderate weather man who picked the time for a miniature rainy season throughout the district.

The most commonly predicted movement is in the natural gasoline markets. This betterment in position is already in the insipient stage as the following representative schedule shows: Grade A, 1⅞ cents; Grade AA, 80-84 gravity of low vapor tension, 1¾ cents; Grade AA (regular), 1½ cents, and propane free, 1⅝ cents; Grades BB and C, 1⅛ cents.

The 50-52 gravity, 437 endpoint naphtha regularly used in making blended gasoline has moved up slightly to the ruling price of 3 cents with some material going at an eighth of a cent more. The number of trackage stations selling blended motor fuel has increased considerably. At these stops the service station price is 7 cents, or 1 cent under Stanolind Blue.

Third-Grade Gasoline

Standard Oil Co. of Indiana last week reduced the service station price of its third grade a quarter of a cent to 8 cents, and the tank wagon price was cut 1 cent to 8 cents, excluding the 3-cent state gasoline tax. This reduction meets the cut introduced by Sinclair Refining Co. three weeks ago, and has been followed by the majors who have been guided by the Stanolind Blue market.

The third-grade postings were likewise reduced at the following points: Minneapolis, cut 1.2 cents to 12 cents service station; St. Paul, cut same as Minneapolis; St. Joseph, service station price reduced 1 cent to 8.9 cents, and tank wagon price cut 2.6 cents to 8.9 cents. These prices include state gasoline tax of 3 cents.

Wet Weather Cuts Gallonage

Full appreciation of the better turn proclaimed by the statistical figures on motor fuel stocks, the improved outlook for curtailment of crude oil, and such happy omens as the withdrawal of the Stanolind Oil & Gas Co. as crude oil purchaser in East Texas, has been hampered the past week in the Chicago district by rains and raw weather. Even the fact that the export business in refined products and natural gasoline is beginning to show signs of activity has passed by apparently unnoticed.

The unpleasant weather, attended by chilling winds, has had the effect, however, of increasing the movement in furnace oils without improving the prices. If anything, fuel oils and gas oils have sagged a little in price.

Progress of Octane Numbers

Price cutting, figuratively speaking, has stepped out of bounds and established itself in the aloof realm of antiknock gasolines. The thought that low price competition at the service stations would soon pass from the third-grade fuel of 52 octane number to gasolines of 60 and better octane number has hardly been entertained, so the latest development in the price war presents difficult and numerous complications.

The obvious question is: "Do these cut-price gasolines really have the octane numbers ascribed to them?" A representative antiknock gasoline with a reported octane number of 75 is being sold at at least 50 service stations in Chicago at 15 cents, 2 cents below the Ethyl Gasoline price. This cut-rate gasoline is colored red and its efficacy in high compression ratio engines is attributed to the fact that it is a cracked motor fuel produced from Smackover crude oil. The tank car price of this gasoline ranges from 4⅛ cents to 4¼ cents.

Cracked Gasoline for Blending

A considerable supply of cracked gasoline which is sold directly as a premium gasoline ranging from 70 to 75 octane number, or is sold to marketers for blending with straightrun to raise the antiknock rating, is available from Shreveport, La., El Dorado, Ark., Wichita Falls and Mirando City, Tex. A comparatively small portion of this is at present going to cut-rate channels. This antiknock gasoline is principally distributed in Ohio, Pennsylvania and certain sections of Missouri.

The introduction of the third grade of gasoline is widely reported to have aggravated the always serious traffic problem in the city of Chicago. The poor pick-up and antiknock qualities of this cheap fuel, it is said, have slowed down the moving stream of automobiles. "Automobile drivers," the knowing one say, "will soon tire of stalling their motors when the lights turn. They'll miss the prompt response of an engine designed for a much better fuel."

Tank Car Price Cuts

The next few weeks are expected to see an increase in popularity of antiknock gasolines among the trackage stations. This probability has followed the cutting in price of cracked gasolines to from half a cent to 1 cent above the U. S. Motor gasoline prices. Thus cracked gasoline is available in sizable quantities from Texas and Arkansas at prices of 3¼ to 3¾ cents.

These prices do not include gasoline from Mirando City, Tex., which commands a premium of 3 cents above the U. S. Motor market. The refinery at this city produces from five to six cars of cracked gasoline a day and the entire output is sold out to major refiners who use it to bring up the antiknock rating of their own gasolines. Characteristics of this gasoline are as follows:

Octane number	75
Initial	128
Endpoint	410
Gravity	48.7
Color (before exposure)	30
Color (after exposure)	29
Doctor	Sweet
Sulphur, per cent	0.04
Corrosion	Negative
Gum (copper dish)	4mg.
Gum (glass dish)	None

Intermediate points: Five per cent, 173; 10 per cent, 192; 20 per cent, 219; 30 per cent, 243; 40 per cent, 263; 50 per cent, 283; 60 per cent, 302; 70 per cent, 318; 80 per cent, 340; 90 per cent, 372; 95 per cent, 395; over, 97.5 per cent; bottoms, 1.5 per cent; loss, 1 per cent.

Octane Number Misconceptions

It is not uncommon to hear filling station attendants speak of 95 and 100 octane number as a matter of course, but the prevalence among brokers and jobbers of similar apparent misconceptions as to the antiknock rating standard which has a place in the industry has a serious aspect.

One marketer accepted the word of the refiner that a certain cracked gasoline had a "good" antiknock quality. This marketer did not submit the gasoline to a laboratory equipped with the proper installations for antiknock testing; instead he sent out tank car lots as samples at a price of half a cent above the U. S. motor market, this price increase being dependent upon the satisfaction of the buyer. Eventually a test was made on a Series 30 Ethyl engine and the price went up 2½ cents.

Jobbers are taking increasing amounts of antiknock gasoline and it has become important to obtain a standard method of grading gasolines in respect to this quality. A large number of buyers and small sellers are still depending upon the stated "benzol equivalent" of a motor fuel in making their prices. It is now generally agreed that the term "benzol equivalent" gives no real indication of the antiknock quality of a gasoline. To translate "benzol equivalent" bodily into "octane number" will cause serious misunderstanding due to the fact that in the case of obtaining the octane number of a gasoline the reference fuel is a known quantity, whereas in finding the benzol equivalent the reference fuel has an incompletely determined position.

Some Causes of Error

A Mid-Continent gasoline which has a 50 per cent point of 270° and a 400 endpoint has an octane number of 52. Blended equally with a 72 octane number cracked gasoline the antiknock rating will be raised from 52 to 62 octane number or slightly better. The octane number of the finished blend is arrived at by adding the two octane numbers and dividing by two.

However, suppose instead of the Mid-Continent straightrun gasoline of 52 octane number, which is comparatively high, we take a Pennsylvania straightrun. The Pennsylvania crude oil has a large per cent of gasoline. If the yield of 40 per cent gasoline is taken overhead, the resultant motor fuel will have a 28 octane number, a 50 per cent point of 270°, and a 400 endpoint. Now if this gasoline is blended equally with 72 octane number fuel the octane number of the Pennsylvania straightrun cut will be raised to 55 octane number and not 50 octane number. The Ethyl engine has demonstrated this blow to the mathematical expectation. Thus blending with a stock which is low in octane number gives an advantage of 5 octane number. If the lighter 40 per cent of the gasoline cut alone had been taken, that is, 15 per cent of the barrel of crude oil, this fraction would have a 60 octane number and the blend with 72 octane number material would restore the mathematical relation, giving a 66 octane number finished gasoline.

From its showing with the 28 octane number straightrun, with the 5 increment, some buyers and sellers would without the slightest thought of deception accept the 72 octane number gasoline as 82 octane number fuel, by working backward the arithmetical formula thus:

Straightrun	28 octane number
Cracked	x octane number
50-50 blend	55 octane number
Multiplying by two	110
Subtracting 28	82 octane number

Another erroneous practice is that of giving the reference fuel zero antiknock value. This is the source of nearly all of the reported 95 and 100 octane number material. Yesterday a jobber calmly provided the information that he was buying 120 octane number gasoline! Obviously he referred to 70 octane number material.

Another jobber says that he pays little attention to "octane number" and "benzol equivalent," although he buys antiknock gasoline. His procedure is to test the gasoline in question in his own automobile and if it acts like Ethyl, or something approaching it, he accepts it. A competitor is still harder to please and the premium gasoline must stand the test in a Pratt-Whitney airplane motor. There are several single-cylinder engines in this service, outside of the regulation Ethyl Series 30 and the Waukesha engine. It would seem, therefore, that there is much to be done before a real dependable standard on octane numbers is established in this district.

Among the major marketers there is an increasing movement upward in the antiknock quality of the regular grade of gasoline, and it is improbable that any of this grade can be found in the district below 60 octane number. What may happen when, and if, the public becomes octane number conscious may be guessed from the situation in Ohio. Below are given in tabular form the characteristics of five regular grade gasolines sold by major companies in Ohio. Included also are a straightrun, a benzol blend and a natural gasoline blend.

	Brand				
	A	B	C	D	E
Gravity	58.0	54.9	58.1	53.2	61.6
Octane number	72	70	68	68	72
Initial	100	102	104	114	96
5 per cent	130	134	128	142	116
10 per cent	147	156	148	154	130
20 per cent	178	190	180	168	160
50 per cent	252	278	258	192	240
90 per cent	364	392	376	320	354
Endpoint	410	422	414	378	386
Per cent over	98	96.5	97.5	98.0	96.5

The straightrun gasoline offered has the following characteristics: Gravity, 62.8; octane number, 53; initial, 91; endpoint, 403. The 50 per cent point is 254. A motor fuel composed of 90 per cent cracked gasoline and 10 per cent benzol has the following characteristics: Gravity, 55; octane number, 75; initial, 92; endpoint, 410, and a 50 per cent point of 233. The blended motor fuel composed of 85 per cent straightrun and 15 per cent natural gasoline: Gravity, 63.3; octane number, 53; initial, 90; endpoint, 407, and 50 per cent point at 254.

Kerosene

Kerosenes are inactive although the price is holding better than disturbances in the other markets would lead one to expect. As long as gasoline is in the present low price position there is no reason to believe that farmers and others who have been considered prospective customers for kerosene as motor fuel will choose the less responsive fuel. In fact, the tank wagon price of kerosene in Chicago is 9 cents, while the Stanolind Blue price is 8 cents, excluding the 3-cent tax from which the farmer is exempt.

Fuel Oils and Gas Oils

The fuel oil and gas oil markets were trimmed down a little last week. Prices which are changed are: 18-22 fuel oil, per barrel, 30 to 35 cents; 28-30 fuel oil (zero), 60 to 65 cents; 38-40 straw distillate, 1½ to 1¾ cents.

Lubricating Oils

The spread of 15-cent lubricating oil among cut-price stations has as yet brought no response from the majors. Neutrals are more in demand that bright stocks and prices below 14 cents are quoted in many quarters.

JAPAN'S OIL PRODUCTION

Japanese production of crude oil during 1930 came to 1,834,869 bbls.

Eastern Refined Oil Market Is Soft

Sales of East Texas Crude for Export Interests Trade. Gulf Coast Gasoline Big Factor in Eastern Area

By A. E. Mockler

New York Bureau, The Oil and Gas Journal, Rooms 1919-21, No. 154 Nassau Street

NEW YORK, May 25.—Gasoline continued in soft position throughout the week in East Coast markets, and the remainder of the market was likewise easy. The tank car market for U. S. Motor gasoline has settled at 5¾ cents at refinery terminals in the New York harbor district on the part of the larger interests, with smaller sellers going fractionally under this level, although a few marketers quote 6 cents and one seller, handling California gasoline exclusively, quotes the market at 6¾ cents.

Considerable interest in crude oil for export to France is reported in the local trade this week. One contract, calling for delivery of approximately 350,000 bbls. of East Texas crude over the next three months, was closed during the week, and operators are figuring on a number of additional contracts. Refiners running East Texas crude have been able in recent weeks to close one or two export gasoline contracts at the Gulf in competition with Rumania and Russia, an achievement that has not been equaled by American refiners for some months past.

Sentiment as to the market outlook for the near future continues mixed. Some leading executives in the East are of the opinion that the third quarter of the year will witness a real recovery in prices, with a consequent firming-up of the position of the entire industry through enhancement of inventory values, as well as the betterment of returns on spot sales. Other oil men, however, hold to the belief that the summer season will witness a continuation of present unsettled conditions, and that while products' prices are near the low for the year, the recovery in prices will be extremely slow, and that no pronounced improvement in this respect can be looked for until the closing quarter of 1931.

Refinery Gasoline

The market for U. S. Motor gasoline at local terminals ranges 5¾ to 6¾ cents per gallon in tank car lots. Standard Oil Co. (New Jersey), The Texas Company and Pan American are quoting 5¾ cents; Continental Oil, 5⅞ cents; Colonial Beacon, Gulf, Shell Eastern, Warner-Quinlan, Tide Water, Socony and Crew-Levick, 6 cents, and Richfield, 6¾ cents per gallon.

Warm and clear weather has brought about a pronounced increase in consumption during the past week and jobbers are coming into the market for replacement supplies more frequently. There is still a pronounced disinclination on the part of distributors to fill their storage, however, and it is evident that there is little confidence among jobbers in the stability of the market, even at 5¾ cents.

Gulf Coast gasoline is coming into the New York market in a larger way and handlers of motor fuel from Gulf refining points are in position to undersell local refiners by a sufficiently wide margin to insure regular outlets for their product.

California gasoline is moving eastward in well regulated volume and shipments are being absorbed readily. A number of the large integrated companies with regular movement of the Pacific Coast motor fuel to their eastern refineries are utilizing most of their California gasoline receipts in premium fuel blends.

South American gasoline receipts at Atlantic Coast ports have fallen off sharply during recent weeks in line with the curtailment policy announced by leading importing companies.

Tank Wagon Gasoline

The market has again eased off in local territory. The posted price for leading brands at service stations is 15.3 cents per gallon, but in the metropolitan area most sellers are back to 8 gallons for $1, including tax, as compared with a price of 7 gallons for $1 by most sellers during the past few weeks.

Major marketers have not yet readjusted their posted price schedules in line with the lower refinery market for gasoline, and with most sellers it is still a case of meeting local competition as it develops.

Gallonage has expanded substantially during the past week, and, while leading marketers believe that the continued business depression will cut into consumption figures in the East this summer, it is still expected that aggregate gallonage for the year will show an increase over 1930 totals.

With the advent of warmer weather, demand for premium gasolines has contracted somewhat, and the higher priced motor fuels are beginning to come in for the same drastic price cutting that characterizes the marketing of the so-called "ordinary" fuels.

Advertising of the different brands leading in sales in this territory is stressing both quality and price, with several marketers featuring the octane rating of their product, while one company is featuring the relative gum-free quality of its gasoline, and inferentially attacking the gumminess of other brands.

Kerosene

The posted price for 41-43 water white kerosene has been reduced one-quarter cent to 5½ cents per gallon in tank car lots at refineries, but the "going" price is still a quarter cent under this figure, with but a limited volume of business passing.

Tank wagon demand for kerosene is showing a seasonal decline, with the posted price structure remaining unaltered.

Export inquiry for kerosene is holding up fairly well, with local sellers moving the cased product into foreign channels in fair quantities. Russia, however, is still furnishing stiff competition in the principal export markets.

Bunker Oil

Demand for bunker "C" oil continued steady throughout the week, and the market was unchanged at 95 cents per barrel in bulk, f.o.b. refinery terminals. Contract withdrawals are well maintained, but spot demand has eased off a little.

Marketers look for a larger volume of spot business than usual during the summer months. Owing to the drop in transatlantic travel, a number of the larger lines will detach some of their bigger vessels from their usual runs and place them in the short cruise service out of New York. This means that these steamers, which normally draw a large part of their fuel oil requirements at British and French ports, will do all of their bunkering at New York during the summer.

Bunker oil is available at 60 cents per barrel in cargo lots at the Gulf, but little of this oil is expected to move northward.

Diesel Oil

Refiners continue to quote the market at $1.65 per barrel, with a good demand reported. Contract business is running somewhat in excess of last year's totals in many instances, and the outlook for the remainder of 1931, from a gallonage standpoint, is fairly favorable.

Notwithstanding the recent cut in the posted price for Diesel oil at Atlantic and Gulf Coast ports, the market is still in somewhat easy position, and refiners are watching the market position carefully to protect their outlets in the event of any price cutting of major importance.

Gas Oil

The recent drastic cut in the price of 28 plus recycled gas oil, bringing the market down from 5¼ to 4 cents per gallon in tank car lots at refinery terminals, has adjusted the market to lower production costs, and principal sellers are adhering to the 4-cent figure in current sales.

Contract withdrawals of gas oil have fallen off somewhat during the week, and spot demand is likewise sluggish.

Lubs

Spot 600 Pennsylvania flash is available at 19½ to 20 cents per gallon, a reduction of one-half cent from previous quotations, but with this exception the market for cylinder oils went through the week unchanged. Blenders were coming into the market for lubs, particularly bright stocks, in better volume, and refiners were looking for a steady expansion in sales, with a firming-up in the price position, as the summer motoring season gets under way.

Red and pale oils were moving in limited volume during the week, quotations remaining unchanged on all grades.

Wax

An easier undertone has developed in the paraffin wax market during the week, with 120-122 a.m.p. fully refined quoted at 2⅞ cents per pound, off one-eighth cent per pound, and 133-135 a.m.p. showing a corresponding decline at 4⅛ cents.

Refinery holdings of paraffin wax are fairly heavy, and periodical offerings of prompt shipment material at price concessions is tending to make for an unsettled market.

Domestic consumers are taking stocks only as needed, and export demand has reacted downward.

Gulf Export Market

Considerable interest is shown in export marketing circles over the disclosure that the export association, which withdrew from active participation in the market during the latter part of 1930, is continuing its organization structure with a view to resuming its activities

(Continued on Page 114)

CLASSIFIED WANTS

(Continued from Page 100)

POSITIONS WANTED

GEOLOGIST—12 years' experience, executive position, major oil company, land and geological depts., desires connection with responsible parties. Nominal salary and interest preferred. Write Box E-484, The Oil and Gas Journal, Tulsa Okla.

DESIRE CONNECTION with producer who would be in a position to furnish 1,500 bbls. of high-gravity, Mid-Continent crude per day, also to take financial interest in Canadian refinery. Answer Box E-424, The Oil and Gas Journal, Tulsa, Okla.

CONSTRUCTION, or operating superintendent of casinghead gasoline plants. Qualified to handle several projects in the oil and gas business. Can furnish good reference. Will go anywhere in U.S.A. Write Box E-488, The Oil and Gas Journal, Tulsa, Okla.

TRAFFIC MANAGER desires new connection. Twelve years' experience in this capacity with large independent refiner. Understand I.C.C. procedure thoroughly. Familiar with rate structure on petroleum products. Capable of making analysis of your rate problems and taking steps to place you on an equal basis with your competitors. Can show an enviable record of operation of a private car line. At present employed in the industry. Can furnish best of references as to character and ability. I am 36 years old and married. I am in position to go anywhere on short notice. Will consider position as assistant traffic manager with large refiner. Address P.O. Box 220, Fort Wayne, Ind.

GRADUATE CONSTRUCTION ENGINEER-SUPERINTENDENT. Eight years' experience refinery and main line pump station construction. Estimator. Desires permanent position with reliable concern. Available June 1. Desired references furnished. Write Box E-494, The Oil and Gas Journal, Tulsa. Okla.

GEOLOGIST AND PETROLEUM ENGINEER
7 years' thorough practical experience, major oil company, desires connection. Would accept part salary and interest. Write Box E-491, The Oil and Gas Journal, Tulsa, Okla.

POSITIONS WANTED

PETROLEUM CHEMIST with six years experience in complete oil refining. Gas analysis and knock testing. Available June 10. Write, Box E-485, The Oil and Gas Journal, Tulsa, Okla.

A FORMER Chicago manufacturer opening sales office in San Francisco will consider proposal from eastern manufacturers desiring Pacific Coast representation. Write Box E-477, The Oil and Gas Journal, Tulsa, Okla.

HELP WANTED

WANTED: Salesmen and Sales Organizations to sell acreage proposition in Tioga Field. Fast selling proposition, must be reliable and furnish reference first letter. Address Tioga Realty & Development Company, Williamsport, Pa.

SALESMANAGER WITH $5,000, to join old New York brokerage house, build up oil royalty sales force and clientele, handling large transactions. References. Parmer and Company, 25 Broad St., New York, N. Y.

SALESMAN, EACH STATE, to handle new patented article for oil country. Commission only. Investment required. Write Box E-496, The Oil and Gas Journal, Tulsa, Okla.

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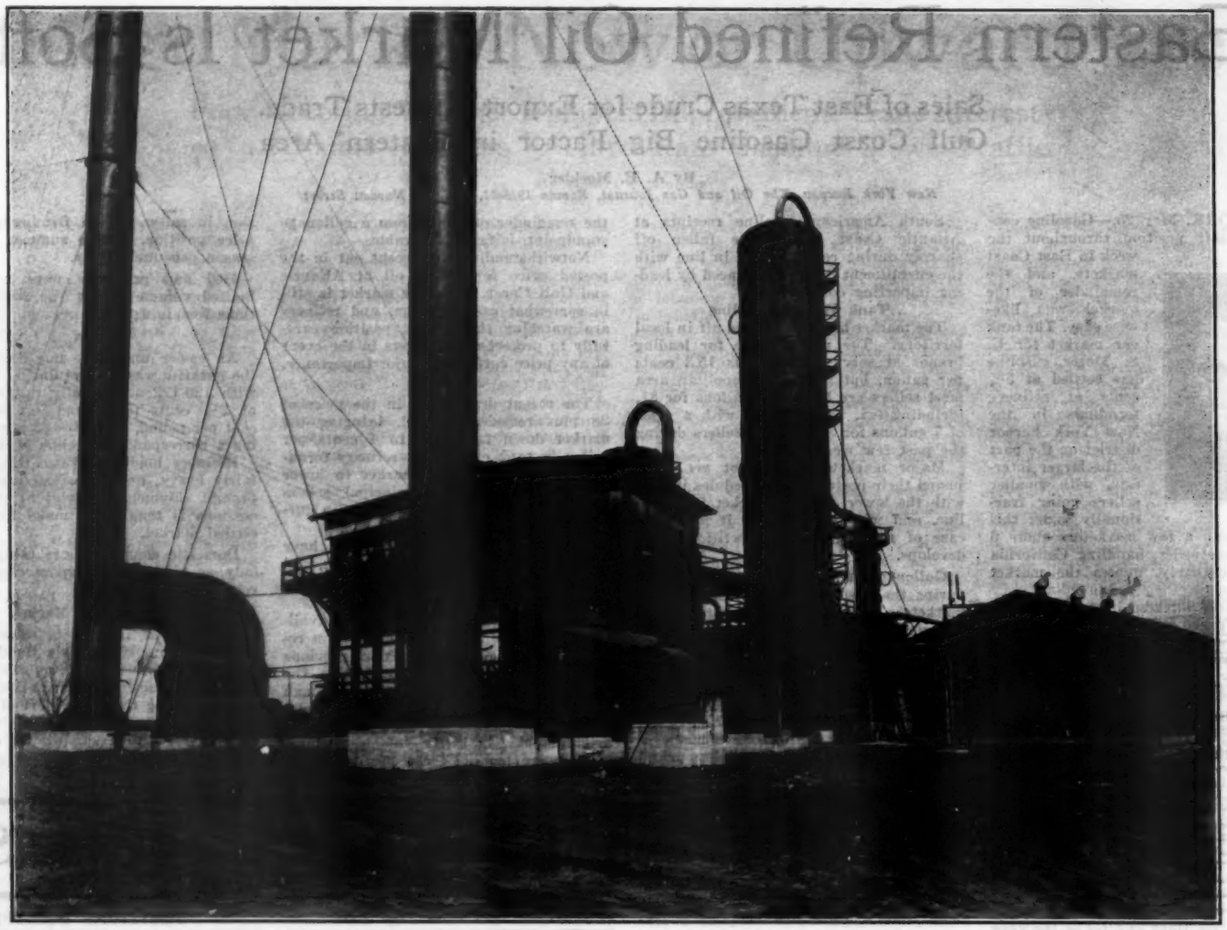
Eastern seaboard refiners—tank car and barge sales—branded and unbranded gasolines and lubricants. Vacancy created by promotion. Give complete statement of experience. Write Box E-489, The Oil and Gas Journal, Tulsa, Okla.

GULF COAST SPECIALTY JOBBER wants experienced supply salesman; increasing present line oil field specialties; offer liberal straight commission plus opportunity to invest in company; only man seeking advancement and able to finance self several months need apply. Benefits of practically your own business obtainable. Write Box E-497, The Oil and Gas Journal, Tulsa, Okla.

I NEED A SALESMAN to sell Oklahoma oil royalties and land. My plan would place you in business for yourself. Write Box E-493, The Oil and Gas Journal, Tulsa, Okla.



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Brief Items for Petroleum Refiners

LOWER ASPHALT DEMAND MET BY SMALL OUTPUT

WASHINGTON, D. C., May 22.—Domestic demand for petroleum and lake asphalt in the United States in 1930 fell 16 per cent short of the demand in 1929 and 7.4 per cent short of the demand in 1928. At the same time the production of asphalt by petroleum refineries decreased 14.8 per cent from 1929 to 1930, and 6.3 per cent from 1928 to 1930, according to preliminary statistics compiled by A. H. Redfield of the United States Bureau of Mines, Department of Commerce. Imports, chiefly of lake asphalt and grahamite, were less than half as large in 1930 as in 1929. As production was curtailed to meet the reduced demand, stocks of petroleum asphalt held at refineries were only 3 per cent larger on December 31, 1930, than on December 31, 1929. Exports of petroleum asphalt in 1930, especially to northern and western Europe, and to the Far East, fell 14.4 per cent below those of 1929. Prices of all grades of petroleum asphalt averaged 5.6 per cent lower in 1930 than in 1929. Similarly, sales of rock asphalt by producers in the United States were 11.2 per cent less in quantity and 12.4 per cent less in value in 1930 than in 1929. Less than half as much natural rock asphalt was exported from the United States in 1930 as in 1929.

The refinery production of petroleum asphalt (exclusive of road oil) decreased from 3,548,527 short tons in 1928 and 3,904,755 tons in 1929 to 3,326,378 tons in 1930. The principal decreases took place in the East Coast district, which produced 1,770,906 tons in 1929 and 1,506,900 tons in 1930; in the Indiana-Illinois district, which produced 688,842 tons in 1929 and 485,891 tons in 1930; in the Gulf Coast of Louisiana, which produced 459,149 tons in 1929 and 312,065 tons in 1930; and in the California district, which produced 659,226 tons in 1929 and 629,548 tons in 1930. On the other hand, production of petroleum asphalt in northern Louisiana and Arkansas increased from 45,670 tons in 1929 to 99,360 tons in 1930; and in the Appalachian district from 26,743 tons in 1929 to 44,805 tons in 1930.

Less asphalt was made from foreign petroleum in 1930 than in 1929 or 1928. Of the 3,326,378 short tons of petroleum asphalt manufactured in 1930, 1,824,080 tons was made from crude oil imported chiefly from Venezuela, Mexico and Colombia, compared with 2,247,460 tons made from foreign oil in 1929, and 2,156,172 tons in 1928. The percentage of the total made from foreign crude decreased from 60.8 per cent in 1928 to 57.6 per cent in 1929 and 54.8 per cent in 1930.

RAILROAD AND OIL PIPE LINE MEN MEET

NEW YORK, May 23.—A group of railroad executives held a conference with representatives of the American Petroleum Institute at the Hotel Biltmore to work out a program that will end competition between rail carriers and pipe lines. No final conclusions were reached and additional meetings are scheduled. The problem confronting the two interests centers chiefly around the building of pipe lines into territories already served by the carriers. Another problem concerns rates. In the Southwest, especially, there has been what is rapidly becoming a small-sized rate war between the pipe line carriers and the railroads, which is proving unprofitable to both. The American Petroleum Institute was represented by W. C. Teagle, J. Howard Pew, R. C. Holmes, H. L. Pratt, W. T. Wallace, E. G. Bullock, C. B. Ames and W. R. Boyd, Jr., executive vice president, American Petroleum Institute.

J. F. CAMPION DIES

Funeral services for J. F. Campion, president and general manager of the Valley Refining Co., were held last week in Chicago. Mr. Campion died suddenly at his home in Roswell, N. Mex., where he had been operating the Valley company refinery and marketing business for the past three years.

Mr. Campion was widely known in marketing circles throughout the Mid-Continent and Middle West. He lived in Tulsa for several years doing a general marketing business and operating a compounding plant. He operated under the name of the Campion Oil Co.

REFINERY NEARING COMPLETION

CHATHAM, Ontario, May 23.—Announcement is made that the new refinery of the British-American Oil Co. at Montreal East, Quebec, is considerably ahead of construction schedule, and will be in operation early in August. Crude for the plant will be brought in tankers from Gulf of Mexico ports, and surplus products not required for eastern Canada trade will be transported to Toronto by lake tankers.

DR. S. W. PARR DIES

Dr. S. W. Parr, emeritus professor of the University of Illinois, died May 17 at his home in Urbana, Ill. He was 74 years old. Mr. Parr was widely known among chemists in the petroleum industry.

RUBBER A PRODUCT OF VAPOR PHASE CRACKING

Rubber made from petroleum gases has been the subject of investigation among many laboratories and from time to time specimens have been exhibited but the cost manufacture has always been considered prohibitive.

B. T. Brooks, well known as an oil research chemist, states that vapor phase cracking will tend to greatly enhance the commercial possibilities of manufacturing synthetic rubber from unsaturated petroleum gases. The presence of butadine in these gases is the basis for the statement. A sample of the rubber made from this gas as a base, was exhibited at the recent chemical show in New York City.

AWARD WETHERILL MEDAL TO THE LATE T. T. GRAY

The John Price Wetherill medal of the Franklin Institute, Philadelphia, Pa., was awarded last week to the late T. T. Gray, president of the Gray Processes Corp., Newark, N. J. Mr. Gray died April 27 after a brief illness.

The Franklin Institute in awarding the medal to Mr. Gray made the announcement that it was given in consideration of his pioneer work in the application of a catalytic process to the refining of gasoline. Mr. Gray with associates developed the Gray process for vapor phase treating of gasoline.

A. M. Gray, a brother of T. T. Gray, represented the family in accepting the medal at Philadelphia.

TO MANUFACTURE BROMINE

The Dow Chemical Co. has purchased a tract of land near Wilmington, N. C., and will erect a plant for the extraction of bromine from sea water. The Ethyl Gasoline Corp., it is understood, will be associated with the Dow company in the project. The Ethyl corporation will utilize ethylene dibromide in the production of tetraethyl lead for use in blending antiknock gasolines. The Dow company plans to manufacture ethylene dibromide from the bromine which occurs in sea water to the extent of 60 to 70 parts per million.

SELL BUTLER REFINERY

Sale of the refinery of the Butler County Refining Co. at Bruin, Pa., to H. H. Phillips of Butler, Pa., was approved by the federal court at Pittsburgh, Pa., last week. The company was placed in the hands of a receiver last January. The price paid was $218,000. The Phillips' offer was the only one made.

CHILE PLANS FOR MONOPOLY ON OIL

NEW YORK, May 25.—Provision for nationalization of the petroleum industry in Chile has been made by the new Chilean oil laws, details of which have just been received here. The salient features of the new law are as follows:

"Article 1. In the national interest the State reserves to itself the right to construct and operate refineries using imported or national petroleum, and installation for the hydrogenation of petroleum or national or foreign coal. Special legislation will be necessary to permit the construction and operation of private refineries and installations.

"Article 2. Oil refiners operating installations prior to the promulgation of this law will have the right to continue their operations, with the privilege of increasing their output to twice their present, duly authenticated, productive capacity."

The Chilean Government is considering State participation in the petroleum industry on the following three possible methods:

(a) Establishment of a national refinery, without sales monopoly.

(b) State monopoly of imports, distribution, and sale of products, without refinery.

(c) National refinery, combined with monopoly of refining, distribution and sale of refined products.

SKIMMING PLANT AT WACO

Ground was broken at Waco, Tex., May 21, for a 1,000-bbl. skimming and topping plant to be constructed by the Master Petroleum Co., which was organized by a group of Waco business men. The plant is to be completed and refining operations start on or near July 15, to process crude oil which will be shipped over the Cotton Belt Railroad from the East Texas fields of Rusk and Gregg Counties.

Officials of the Master Petroleum Co. are: S. J. T. Smith, president; R. V. McClain, vice president; Floyd Casey, secretary-treasurer.

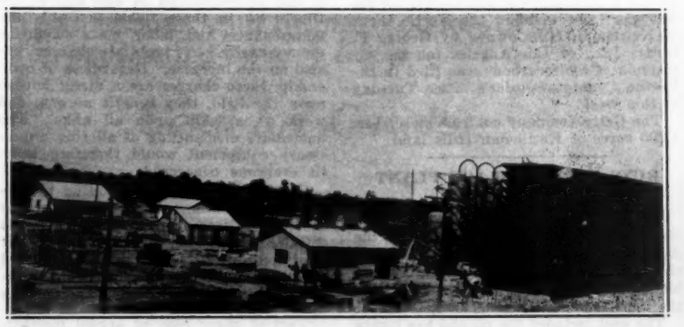
This will be the first refinery to be constructed in recent years in Waco.

ALBERTA OIL POOL

CHATHAM, Ontario, May 23.—It is officially stated that the Alberta Oil Consumers Co-operative, Ltd., the "Alberta oil pool," has handled more than $100,000 of tractor fuels and lubricating oil and greases since March 1, 1931, distributed to farmers in Alberta. The fuels are refined at Coutts, Alberta, and the lubricants imported from the eastern states.

TWO SKIMMING PLANTS NOW UNDER CONSTRUCTION IN EAST TEXAS FIELD

Twenty-five hundred-barrel plant of the Beacon Oil & Refining Co., located near Henderson. Plant operating.



The Taylor Refining Co. plant at Tyler, Tex. The plant which has a rated capacity of 16,000 bbls. daily is the largest in East Texas. The plant will start operating early in June.

Manufacture of Natural Gasoline

Standardization of Plant Tankage To Be Investigated First

The standardization of tanks at Mid-Continent natural gasoline plants has been undertaken by a committee of the Natural Gasoline Association as the first step in a general program of equipment standardization. The annual report of the committee, made by George P. Bunn, of the Phillips Petroleum Co., chairman, includes the following:

"This committee has met and has considered the general problem, deciding to arrange the work under the most obvious classifications of equipment on which it might be possible to effect some standardization. It was not at all presumed that all phases of gasoline plant construction and operation could be standardized, but it has been thought possible that much good could be accomplished along the lines of effort demonstrated by the A.P.I.

"The committee has been feeling its way carefully and up to date, has, by way of development, appointed an active subcommittee which has been considering the one topic of tankage specifications. This subcommittee has attacked tankage standardization from the standpoint of

Construction
Dimensions and fabrication.
Weight of material.
Test pressure.
Connections.

Foundations
Concrete.
Steel.
Vertical.
Underground.

Location
Spacing.
Location from plant.

Painting
Specifications.
Color.

Safety Devices
Pop valves.
Fracture plates.
Vacuum relief valves.
Gauge glasses.
Miscellaneous safety devices.
Snuff lines.

Piping
Headers.
Gate valves.

"This tankage report, although practically completed, has not yet been considered by the standardization committee, but from the results of this effort, the committee hopes to be guided in the future work of this nature. This is a new endeavor for the association and the general committee will welcome your comments and suggestions for its guidance."

GET KETTLEMAN HILLS GAS

LOS ANGELES, Calif., May 23.—An agreement whereby the Los Nietos Producing & Refining Co. will receive all the wet gas from wells in the North Dome of Kettleman Hills owned by George F. Getty, Inc., of Los Angeles for the extraction of hydrocarbons was filed in the Fresno County recorder's office Tuesday of this week.

The Getty company controls more than 1,200 cares of Kettleman Hills land.

BUYS CARBON BLACK PLANT

NEW YORK, May 23.—The Carbon Black Production Corp., subsidiary of the Appalachian Pipe Line Co., has purchased a single-unit 30-building carbon black plant, located at Guthrie, La., from the New Process Carbon Black Co.

The deal included the oil and gas rights on 600 acres of land in Ouachita Parish, including five producing gas wells.

ADVOCATING CONSOLIDATION OF PLANTS IN DEPLETED GAS FIELDS

By Alexander B. Morris
Consulting Engineer, Tulsa, Okla.*

There is not a company of any size which has not at the present time at least one, and probably several, gasoline plants which could not be profitably operated even at a 5 or 6-cent gasoline market. The natural course of development of any oil field where appreciable quantities of wet gas are available is such that eventually this condition must arise. Unless the field is developed and operated under unit control, entirely too much capital is poured into gasoline plant facilities as well as into drilling. These facilities may be inadequate to handle all the flush gas, and still be excessive from the point of view of the burden which the field, as a whole and over its entire life, is capable of supporting.

The only remedy for such conditions is the consolidation of plants in such depleted fields. This may be accomplished in one of two ways.

In the case of one of a group of plants shutting down, the field lines or a part of them may be purchased by one of the other plant operators, but more often the small amount of gas thus gained is not worth the cost of the lines, and the oil operator is left without vacuum or residue service and the gas is wasted to the air. Under this system, the withdrawing operator loses all interest in the location and has to write off his entire remaining investment, and the remaining operators derive little or no benefit from the fact that there is one less plant in the field.

In the other case every operator admits that he is in an unendurable position. They retain all facilities which have the potentialities for profit, at the same time remove the sources of loss and duplication of effort.

The forces in favor of voluntary consolidations in depleted fields, operate through several channels. In the first place, though labor and maintenance generally decrease as production falls, there comes a time when these items can be reduced no further, so that the further inevitable drop in production results in an increased cost per gallon of gasoline produced. Most of the plants under consideration have already reached this critical point. This increase is in no way affected by low price, but when the price is low, such an increase may well more than consume any margin between operating income and operating expense. Practically all plants in depleted fields are running far below the capacity for which they were built, and accordingly have much idle equipment, the fixed charges upon which must be paid out of the production of the plant as long as it remains in place. Even though an engine and compressor unit is kept turning over, but is handling only half as much gas as could be put through it, it can be considered as idle half of the time. So in these fields not only are maintenance and labor costs mounting unnecessarily, but capital charges are also on the increase. Regardless of ownership, these charges are a direct burden upon the field, they benefit no one, and work a hardship upon all alike. The immediate dismantling of all this unnecessary equipment would therefore benefit everyone concerned.

Chief among the forces acting to prevent consolidations is fear. Fear that the party first suggesting the move has definite knowledge that he will profit most from it, fear that in any proposed consolidation, the distributions of interest will not be equitable; fear that the party having operation of the joint project will seek to benefit unduly and at the expense of the other participants through padding or excessive overhead charges, or fear that control of the output will be used adversely to the non-operating parties. The next most important force adverse to concerted action is greed, felt by all and giving rise to the fear of it in the others. The operator controlling the major portion of the gas tries to control the entire situation at the expense of others. The operator owning most of the equipment which will best serve the needs of the group tries to exact an excessive price for his contribution.

If a plant is contributed to a consolidation, what shall be done with the residual investment on the books? It might be written off in full. If this is not done the contract representing the consolidation may be set up in its place at the net book value, so that the profit and loss account is not affected. This is justified since the contract has greater potentialities for profit than the plant had. This contract value may then be amortized over the estimated future life of the project. Another complication arises when the plant is included in a general mortgage. How can the trustees be prevailed upon to release it? Most indentures contain clauses granting the mortgagor permission to sell or exchange property up to a certain limit of value without consulting the trustees. Where, however, the value of any plant amounts to a considerable portion of the assets pledged, the specific permission of the trustees would probably be required, and it would be necessary to convince them that the interests of the bond holders would be improved as a result of the consolidation. This would be easy to do, in most cases, since practically any plant in such a situation could easily be shown to have no more than junk value, whereas the contract, which would be substituted to the trustees in place of the physical assets, could be shown to have some potentiality for profit. Also, under some of the consolidation plans that have been proposed, it is not necessary for the withdrawing company to sever his title to the assets; he merely surrenders possession and operating control.

A plan which has been put into operation between two old plants near Drumright, Okla., will serve as an example of what can be done. In this project, both operators admitted their plants could not be operated at a profit unless some quite miraculous improvement in market should develop. Both had approximately equal potential gallonage, but one plant, the one which was kept in operation, showed somewhat better operating efficiency. A straight partnership was arranged on a fixed percentage basis, the withdrawing operator taking the short end. This operator salvaged his plant, but left in his field lines which remain his property. Maintenance on these lines is borne by the remaining operator, but material replacements are paid for out of the distributive share of the original owner. In computing profit or loss for distribution, depreciation is not included, but administrative and overhead expense is charged to the plant on a prearranged unit basis, so that it falls proportionally upon both parties. Replacements in the remaining plant are included in operating expense.

Another plan, which I have permission to describe, though I have been asked not to disclose the parties to it, and so will have to conceal the locality where it is being tried, consists of a swap of plant facilities of A company in one field for approximately equivalent facilities of B company in another field. This will enable each company to shut down and dismantle one complete plant, and will further enable one of them to salvage a booster station and about 6 miles each of 5 and 6-inch pipe. Furthermore, both companies will come out with plants which have sufficient gallonage to enable them to show a profit at a much lower price for gasoline than would have been possible under the original regime.

*Part of paper read at annual membership dinner during meeting of Natural Gasoline Association of America, May 19, 20 and 21.

QUALIFICATIONS OF A PLANT STORE KEEPER

C. F. Wilson, supervisor of stores for the Lone Star Gas Co., has summarized the qualifications and the duties of a store keeper at a natural gasoline plant. Mr. Wilson's summary includes:

First: He should have a thorough knowledge of the materials which he is to handle, and the purposes for which they will be used.

Second: He should be able to command the respect of the men who draw material from his storeroom, and thereby be able to secure their hearty co-operation.

Third: He should thoroughly understand the rudiments of accounting and should study the accounting system of his company, knowing the difference between operation, maintenance and construction costs.

Fourth: He should have the ability to gain favor of the merchants and public in the community which he serves, as the company's standing is lowered or raised according to the impression he makes.

Fifth: He should see that his warehouse is kept clean and neat in appearance and his records filed in an orderly manner.

Sixth: He should familiarize himself with all forms pertaining to the company's operation. This applies to all departments as well as his own.

Seventh: He should have a thorough working knowledge of his stock, keeping same to the minimum as nearly as possible.

Eighth: He should know from which concerns the best prices can be obtained in his locality.

Ninth: He should be able to make sketches of a proposed or final project, showing the location of the line or whatever is necessary.

STATEMENT OF USE NOW ACCOMPANIES PURCHASE

TOPEKA, Kans., May 26.—The last session of the Kansas Legislature made amendments to the state gasoline tax law which evidently forebodes trouble for retailers in the State.

The amendment provides that on a motor fuel which is used for any purpose other than propelling motor vehicles, on public roads, state highways, streets and alleys, shall be exempted from the payment of the tax. The law now states: "Immediately upon the purchase of any such fuel the purchaser shall give to the dealer selling same a signed statement, on forms prescribed, prepared and furnished by the state oil inspector, containing the date and number of gallons of such purchase, the purpose for which such fuel is to be used, and that it will not be used

(Continued on Page 120)

WITH TAYLOR INSTRUMENT CO.

In listing the names and the company affiliations of the new directors of the Natural Gasoline Supply Men's Association, E. H. Triphaus, re-elected, was stated as representing the Tagliabue Instrument Co. Instead, Mr. Triphaus represents the Taylor Instrument Co.

A submerged condenser or cooler

with guaranteed capacity

THE capacity of G-R Bentube Sections can be *guaranteed* because scale cannot build up sufficiently to reduce their condensing or cooling effect below the rated amount. Scale which forms on the bowed tubes of these sections is continuously flaked off during normal operation by the change in curvature which accompanies any increase or decrease in temperature. Even when the scale is particularly hard or tenacious, this unique scale-shedding action is positive and thorough and completely eliminates the necessity for laborious hand-scaling.

Write for bulletin explaining in detail the many special advantages of G-R Bentube Sections and describing the many types of service for which they are being widely used.

The G-R Bentube Section is patented and it is our intention to prosecute all infringements. Infringement suits have already been filed in two instances.

The Griscom-Russell Co., 285 Madison Ave., New York

Branches in Principal Cities

Griscom-Russell

Heat Transfer Apparatus

KENNEDY

VALVES-PIPE FITTINGS-FIRE HYDRANTS

WHEN you buy malleable iron pipe fittings with the K-V trade mark, you are sure of quick pipe fitting jobs that will be accurately aligned and permanently tight. Kennedy Fittings are made of truly malleable metal, sturdily proportioned, and with deep, clean, true threads. They protect you against leaky connections, split fittings, and loss of time in connecting up pipe lines.

Send for Catalog

THE KENNEDY VALVE MFG. CO., ELMIRA, N.Y.

New York Chicago San Francisco Philadelphia Cleveland
Atlanta El Paso Los Angeles Seattle

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

GASOLINE AND NAPHTHA

OKLAHOMA (Group 3)—	May 26		May 19		May 12	
50-52 450 endpoint	.02⅞	.03	.02⅞	.03	.02⅞	.03
56-58 450 endpoint	.02⅝	.02¾	.02¾	.03	.02⅝	.03
58-60 437 endpoint (U. S. Motor)	.02¾	.03¼	.02⅞	.03¼	.02⅞	.03¼
60-62 437 endpoint	.02⅞	.03¼	.03	.03¼	.03	.03¼
60-62 400 endpoint	.03	.03½	.03¼	.03½	.03¼	.03½
64-66 375 endpoint	.03¼	.03¾	.03⅜	.03¾	.03⅜	.03¾
68-70 360 endpoint	.03½	.03¾	.03⅝	.03¾	.03⅝	.03¾
64-66 437 endpoint (blend)	.02⅝	.02¾	.02¾	.03	.02¾	.03
NORTH TEXAS—						
50-52 450 endpoint	.02¾	.03	.02¾	.03	.02¾	.03
58-60 450 endpoint	.02½	.02¾	.02¾		.02¾	
58-60 437 endpoint (U. S. Motor)	.02⅝	.03	.02¾	.03	.02¾	.03
60-62 400 endpoint	.02⅞	.03¼	.03	.03¼	.03¼	.03¼
64-66 390 endpoint	.03⅛	.03¼	.03¼	.03⅜	.03¼	.03½
64-66 375 endpoint	.03¼	.03½	.03⅜	.03¾	.03⅜	.03¾
68-70 360 endpoint	.03⅜	.04	.03½	.04	.03½	.04
64-66 437 endpoint (blend)	.02⅝	.03	.02¾	.03	.02¾	.03
***NORTH LOUISIANA—**						
58-60 437 endpoint (U. S. Motor)	.03¼	.03¾	.03½	.03¾	.03½	.03¾
***ARKANSAS—**						
58-60 437 endpoint (U. S. Motor)	.03¼	.03¾	.03⅜	.03¾	.03½	.03¾
PENNSYLVANIA—						
52-54 Naphtha	.04¾	.05	.05		.05	
54-56 Naphtha	.04¾	.05	.05		.05	
58-60 Gasoline	.05		.05		.05	.05¼
60 Gasoline	.05⅛	.05¼	.05	.05¼	.05¼	.05½
62 Gasoline	.05¼		.05¼	.05½	.05¼	.05½
64 Gasoline	.05½	.05¾	.05½	.06	.05½	
68-70 350 endpoint gasoline	.06¼		.06¼		.06¼	
CALIFORNIA—						
†54-58 437 endpoint (U. S. Motor) domestic	.03	.03½	.03	.03½	.03	.03½
†58-60 400 endpoint domestic gasoline	.03¼	.04	.03¼	.04	.04	.04½
CHICAGO DISTRICT (Based on Group 3)—						
50-52 450 endpoint (Naphtha)	.03		.02⅞	.03	.02⅞	.03
58-60 437 endpoint (U. S. Motor)	.02¾	.03⅛	.02¾	.03	.02⅞	.03¼
60-62 400 endpoint	.03⅛	.03¼	.03¼	.03¼	.03⅛	.03½
64-66 375 endpoint	.03½	.03⅝	.03½	.03⅝	.03½	.03¾
64-66 437 endpoint (blend)	.02⅝	.02⅞	.02⅝	.02⅞	.02¾	.03
68-70 360 endpoint	.03⅞	.04⅛	.03⅞	.04⅛	.03⅞	.04⅛
GULF COAST (Export)—						
58-60 U. S. Motor	.04¼		.04¼		.04¼	
60-62 400 endpoint	.04½		.04½		.04½	
61-63 390 endpoint	.04¾		.04¾		.04¾	
64-66 375 endpoint	.05		.05		.05	

*Louisiana, Arkansas, Mississippi and East Texas delivery. †For local consumption.

NATURAL GASOLINE

OKLAHOMA (Group 3)—	May 26		May 19		May 12	
Grade A, 72-79.9, 375 e.p., rec. 90%	.01⅞	.02	.01¾	.01⅞	.01¾	
Grade AA, 80-87.9, 375 e.p., rec. 90%	.01⅝	.01¾	.01⅝	.01¾	.01⅝	.01½
Grade B, 76-83.9, 375 e.p., rec. 85%	.01½		.01½		.01⅝	
Grade BB, 84-92, 375 e.p., rec. 85%	.01½		.01½		.01⅝	
Grade C, 80-92, 375 e.p., rec. 78%	.01½		.01½		.01¼	.01⅝
NORTH TEXAS—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.01⅞	.02	.01¾	.01⅞	.01¾	
Grade AA, 80-87.9, 375 e.p., rec. 90%	.01⅝		.01⅝		.01⅝	.01½
Grade B, 76-83.9, 375 e.p., rec. 85%	.01½		.01½		.01⅝	
Grade BB, 84-92, 375 e.p., rec. 85%	.01½		.01½		.01⅝	
Grade C, 80-92, 375 e.p., rec. 78%	.01½		.01½		.01¼	.01⅝
NORTH LOUISIANA—						
Grade AA, 80-87, 375 e.p., rec. 90%	.01¾		.01¾		.01½	.01⅝
Grade BB, 84-92, 375 e.p., rec. 85%	.01⅝		.01⅝		.01½	
Grade C, 80-92, 375 e.p., rec. 78%	.01⅝		.01⅝		.01½	
CALIFORNIA—						
75-78 375-390 endpoint	.01¾	.02¾	.01¾	.02¾	.02½	.03
CHICAGO DISTRICT (Based on Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.01⅞	.02	.01¾	.01⅞	.01¾	
Grade AA, 80-87.9, 375 e.p., rec. 90%	.01⅝		.01⅝		.01⅝	.01½
Grade BB, 84-92, 375 e.p., rec. 85%	.01½		.01½		.01⅝	

BURNING OIL

OKLAHOMA (Group 3)—	May 26		May 19		May 12	
41-43 water white kerosene	.02⅝	.02½	.02⅝	.02½	.02⅝	.02½
42-44 water white kerosene	.02½	.02¾	.02½	.02¾	.02½	.02¾
NORTH TEXAS—						
41-43 water white kerosene	.02⅝	.02½	.02⅝	.02½	.02⅝	.02½
40-41 water white kerosene	.02¼	.02⅝	.02¼	.02⅝	.02¼	.02⅝
***NORTH LOUISIANA—**						
41-43 water white kerosene	.02⅞	.03	.02⅞	.03	.02⅞	.03
***ARKANSAS—**						
41-43 water white kerosene	.02¾	.03	.02⅞	.03	.02⅞	.03
PENNSYLVANIA—						
43 Kerosene prime white	.04		.04	.04¼	.04	.04¼
45 Kerosene water white	.04¼		.04¼		.04¼	.04⅜
46 Kerosene water white	.04½		.04½	.04¾	.04½	.04⅝
CALIFORNIA—						
38-40 water white Kero. (high burning test)	.04	.04½	.04	.04½	.04	.04½
CHICAGO DISTRICT (Based on Group 3)—						
41-43 water white kerosene	.02⅝	.02⅝	.02⅝	.02½	.02⅝	.02½
42-44 water white kerosene	.02½	.02¾	.02½	.02¾	.02⅝	.02⅞
GULF COAST (Export)—						
41-43 prime white	.04		.04		.04	
44 water white	.05		.05		.05	

*Louisiana, Arkansas, Mississippi and East Texas delivery.

FUEL OIL

OKLAHOMA (Group 3)—	May 26		May 19		May 12	
Below 18 gravity Fuel Oil, per bbl.	.27½	.35	.30	.40	.30	.40
18-22 Fuel Oil, per bbl.	.32½	.40	.35	.40	.35	.40
20-22 Fuel Oil, per bbl.	.35	.40	.37½	.42½	.37½	.42½
22-26 Fuel Oil, per bbl.	.40	.45	.42½	.47½	.42½	.47½
24-26 Fuel Oil, per bbl.	.42½	.50	.45	.50	.45	.50
26-30 Fuel Oil, per bbl.	.45	.55	.50	.55	.50	.55
28-30 Fuel Oil, per bbl.	.50	.60	.55	.60	.55	.60
32-36 Gas Oil (industrial)	.00⅞	.01⅛	.00⅞	.01⅛	.01	.01⅛
32-36 Gas Oil (straw color, high cold test)	.00⅞	.01⅛	.00⅞	.01⅛	.01	.01¼
32-36 Gas Oil (straw color, low cold test)	.01¼	.01½	.01¼	.01½	.01¼	.01½
36-38 Distillate	.01⅜	.01⅝	.01½	.01¾	.01⅝	.01¾
38-40 Straw Distillate	.01½	.01¾	.01⅝	.02	.01¾	.02

Note—Fuel oils over 40 cold test generally 5 to 10 cents per barrel less.

NORTH TEXAS—						
Below 20 gravity Fuel Oil, per bbl.	.25	.35	.25	.35	.25	.35
24-26 Fuel Oil, per bbl.	.35	.40	.35	.40	.35	.45
32-36 Gas Oil (industrial)	.00¾	.01	.00¾	.01⅛	.01	.01⅛
38-40 Straw Distillate	.01⅝	.01¾	.01½	.01¾	.01⅝	.01¾
***NORTH LOUISIANA—**						
18-20 Fuel Oil, per bbl.	.55	.60	.55	.60	.55	.60
30-32 Gas Oil (low cold test)	.02⅛	.02¼	.02⅛	.02¼	.02⅛	.02¼
***ARKANSAS—**						
33-36 Distillate	.02¼	.02½	.02¼	.02½	.02¼	.02½
30-32 Gas Oil	.02	.02⅛	.02	.02⅛	.02	.02⅛
16-22 Refinery Fuel Oil, per bbl.	.50	.55	.50	.55	.50	.55
GULF COAST (South Texas)—						
Gas Oil	.02½	.02¾	.02¾	.03	.03	
Bunker C Fuel (cargo lots), per bbl.	.60	.62½	.60	.62½	.60	.62½
Bunker C Fuel (small lots)	.80		.80		.80	
PENNSYLVANIA—						
30-34 Fuel Oil	.02½		.02½		.02½	.02¾
36-40 Fuel Oil	.02⅞	.02¾	.02¾		.02¾	.03
CALIFORNIA—						
42-45 480 endpoint engine distillate	.03	.04	.03	.04	.03	.04
15-19 Fuel Oil, Bunker (at tidewater), bbl.	.60	.90	.60	.90	.60	.90
15-19 Fuel Oil (cargo lots, at tidewater), bbl.	.55	.85	.55	.85	.55	.85
†15-19 Fuel Oil, f.o.b. tank cars	.30	.70	.30	.70	.30	.70
27 plus Diesel, per bbl.	.70	.95	.70	.95	.70	.95
30-34 Gas Oil	.70	.95	.70	.95	.70	.95
CHICAGO DISTRICT (Based on Group 3)—						
18-22 Fuel Oil, per bbl.	.30	.35	.32½	.37½	.35	.40
22-26 Fuel Oil, per bbl.	.35	.40	.35	.40	.40	.45
28-30 Fuel Oil, per bbl. (zero)	.60	.65	.62½	.67½	.62½	.67½
32-36 Gas Oil (industrial)	.00⅞	.01⅛	.00⅞	.01⅛	.01	.01⅛
32-36 Gas Oil (zero)	.01⅜	.01⅝	.01⅜	.01⅝	.01⅜	.01⅝
38-40 Straw Distillate	.01½	.01¾	.01½	.01⅞	.01⅝	.02

*Louisiana, Arkansas, Mississippi and East Texas delivery. †Lowest priced fuel oil has high sulphur content.

LUBRICATING OIL AND WAX

OKLAHOMA (Group 3)—	May 26		May 19		May 12	
100 vis., 2 color, 20-25 cold test	.05		.05		.05	
100 vis., 3 color, 20-25 cold test	.04¾	.05	.04¾	.05	.04¾	.05
150 vis., 3 color, 20-25 cold test	.07	.07½	.07	.07½	.07	.07½
150 vis., 4 color, 20-25 cold test	.06	.06½	.06	.06½	.06	.06½
180 vis., 3 color, 23-28 cold test	.08	.08½	.08	.08½	.08	.08½
180 vis., 4 color, 23-28 cold test	.07½	.08½	.07½	.08½	.07½	.08½
180 vis., 5 color, 23-28 cold test	.07¼	.07½	.07¼	.07½	.07¼	.07½
200 vis., 3 color, 23-28 cold test	.09½	.10	.09½	.10	.09½	.10
200 vis., 4 color, 23-28 cold test	.09	.09½	.09	.09½	.09	.09½
200 vis., 5 color, 23-28 cold test	.08	.08½	.08	.08½	.08	.08½
240 vis., 3 color, 25-30 cold test	.11	.11½	.11	.11½	.11	.11½
240 vis., 4 color, 25-30 cold test	.10	.10½	.10	.10½	.10	.10½
240 vis., 5 color, 25-30 cold test	.09½	.10	.09½	.10	.09½	.10
280 vis., 3 color, 25-30 cold test	.12½	.13	.12½	.13	.12½	.13
280 vis., 4 color, 25-30 cold test	.11½	.12	.11½	.12	.11½	.12
280 vis., 5 color, 25-30 cold test	.11	.11½	.11	.11½	.11	.11½
Cylinder Stocks:						
600, steam refined, light green	.04½	.05½	.04½	.05½	.04½	.05½
600, steam refined, dark green	.03	.03½	.03	.03½	.03	.03½
190-200 vis., D color, Bright Stocks	.18		.18		.18	
150-160 vis., D color, Bright Stocks 0-10 c.t.	.14½	.15	.14½	.15	.14½	.15
150-160 vis., D color, Bright Stocks 10-25 c.t.	.13¾	.14½	.14	.14½	.14	.14½
150-160 vis., D color, Bright Stocks 25-40 c.t.	.13½	.14	.14		.14	
150-160 vis., E color, Bright Stocks	.13¼	.13½	.13½	.14	.13½	.14
Waxes:						
124-126 White Crude Scale Wax	.01¾	.02	.01¾	.02	.01¾	.02

All bright stock prices are for domestic movement.

PENNSYLVANIA—						
34 Neutral	.05½		.05½	.06	.05½	.06
34 Sundebloom	.05¼		.05¼		.05¼	
36 Miners' Neutral	.05½		.05½		.05½	
150, 3 color	.16		.16¼	.16½	.16½	.16¾
180, 3 color	.18	.18½	.19	.19½	.18½	.19½
200, 3 color	.21	.21½	.21½		.21½	.22
220, 3 color	.23½	.26½	.24		.24	.26
600, steam refined	.08		.08		.08	.08½
650, steam refined	.11	.11½	.11½	.12¼	.11	.12
600, Pennsylvania Flash	.11½	.12½	.12	.13½	.11½	.12½
600, E filtered	.11	.12	.12	.12½	.11½	.12½
600, D filtered, Oil City	.15	.17	.15	.16	.15	.17
Pennsylvania Bright Stocks below 35 c.t.	.17½	.18	.17½		.17½	.18
Pennsylvania Bright Stocks above 35 c.t.	.17		.17	.17½	.17	.17½
*122-124 White Crude Scale Wax	.02		.02	.02⅛	.02	.02⅛
124-126 White Crude Scale Wax	.02		.02⅛		.02⅛	

*At New York.

GULF COAST (South Texas)—						
100 vis., 2-2½ color, pale oil	.05½	.06	.05½	.06	.05½	.06
200 vis., 3 color, pale oil	.07¾	.08	.07¾	.08	.07¾	.08
300 vis., 3 color, pale oil	.09	.09¼	.09	.09¼	.09	.09¼
500 vis., 3½ color, pale oil	.10¼	.10½	.10¼	.10½	.10¼	.10½
750 vis., 3½ color, pale oil	.11¾	.12	.11¾	.12	.11¾	.12
1,200 vis., 3½ color, pale oil	.14¼	.14½	.14¼	.14½	.14¼	.14½
2,000 vis., 4 color, pale oil	.15¼	.15½	.15¼	.15½	.15¼	.15½
200 vis., 5-6 color, red oil	.07	.07¼	.07	.07¼	.07	.07¼
300 vis., 5-6 color, red oil	.08¾	.08½	.08¼	.08½	.08¼	.08½
500 vis., 5-6 color, red oil	.09½	.09¾	.09½	.09¾	.09½	.09¾
750 vis., 5-6 color, red oil	.10½	.11¼	.10½	.11¼	.10½	.11¼
1,200 vis., 5-6 color, red oil	.13½	.13½	.13½	.13½	.13¼	.13½
2,000 vis., 6 plus color	.15¼	.15½	.15¼	.15½	.15¼	.15½
CALIFORNIA—						
130 vis., 2½-3 color	.09	.09¼	.09	.09¼	.09	.09½
200 vis., 2½-3 color	.10	.10¾	.10	.10¾	.10	.10¾
300 vis., 3-3½ color	.10¾	.11½	.10¾	.11½	.10¾	.11½

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

350 vis., 3½-4 color	.11½	.11¾	.11½	.11¾	.11½	.11¾
400 vis., 3½-4 color	.12¼	.12¾	.12¼	.12¾	.12¼	.12¾
Red Neutral:						
200 vis., 4½-5 color	.09½	.10	.09½	.10	.09½	.10
300 vis., 5-6 color	.10¼	.10¾	.10¼	.10¾	.10¼	.10¾
400 vis., 5-6 color	.11	.12	.11	.12	.11	.12
500 vis., 4½-5 color	.12¼	.13	.12¼	.13	.12¼	.13
500 vis., 5-6½ color	.12	.12¾	.12	.12¾	.12	.12¾
600 vis., 6½ plus color	.13	.14	.13	.14	.13	.14

Note—Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK (BAYONNE) REFINERY PRICES

	May 26	May 19	May 12
Gasoline, U. S. Motor, 58-60, 437 e.p.	.05¾ .06¼	.05¾ .06½	.06 .06½
Kerosene, water white, 41-43	.05¼ .05½	.05¼ .05¾	.05¼ .05¾
*Fuel Oil, Bunker "C," 41-43	.95	.95	.95
†Fuel Oil, Diesel, 28-30, per bbl.	1.65	1.65	1.65
Gas Oil, 28 gravity plus	.04	.04	.04
25 pale Paraffin Oil, tank car	.10¼	.10¼	.10¼
28 pale Paraffin Oil, tank car	.07¼	.07¼	.07¼
280 red Paraffin Oil, tank car	.12½	.12½	.12½
250 red Paraffin Oil, tank car	.11½	.11½	.11½
225 red Paraffin Oil, tank car	.10	.10	.10
200 red Paraffin Oil, tank car	.09¼	.09¼	.09¼
Domestic heating oil, min. 32 grav., tank car	.04	.04	.04
Refined Wax:			
120-122 a.m.p., per lb.	.02⅞	.03	.03
125-127 a.m.p., per lb.	.03⅛	.03⅛	.03⅛
130-132 a.m.p., per lb.	.03⅝	.03⅝	.03⅝
133-135 a.m.p., per lb.	.04⅛	.04⅛	.04⅛
135-137 a.m.p., per lb.	.04⅝	.04⅝	.04⅝
Petrolatum in barrels in carload lots, per pound:			
Dark Green	.01¾	.01¾	.01¾
Amber	.03	.03	.03
Extra Amber	.03¼	.03¼	.03¼
Cream	.06	.06	.06
Lily White	.06¾	.06¾	.06¾
Snow White	.08	.08	.08

*Lighterage 5 cents a barrel extra. †Lighterage 6.5 cents a barrel.

NEW YORK (BAYONNE) EXPORT PRICES

	May 26	May 19	May 12
600, steam refined cylinder stocks, in bbls.	.16 .16¼	.16 .16¼	.16 .16¼
635, steam refined	.16½ .17	.16½ .17	.16½ .17
650, steam refined	.19 .20	.19 .20	.19 .20
600, Pennsylvania Flash	.19½ .20	.20 .21	.20 .21
630, Pennsylvania Flash	.25¾ .26	.25¾ .26	.25¾ .26
600, Warren E	.19½	.19½	.19½
600, Oil City E	.18½	.18½	.18½
Light 140-150 Bright Stocks	.25 .26	.25 .26	.25 .26
Dark 140-150 Bright Stocks	.24 .25	.24 .25	.24 .25

LOS ANGELES EXPORT PRICES

	May 26	May 19	May 12
Kerosene, water white	.04 .04½	.04 .04½	.04 .04½
*U. S. Motor Gasoline, 53-55, 437 e.p.	.03¼ .04	.03¼ .04	.03½ .04½
*58-62, 400 endpoint gasoline	.03½ .04½	.03½ .04½	.04 .04½

*For coastwise shipment.

CRUDE OIL PRICES

OKLAHOMA, KANSAS, NORTH AND EAST CENTRAL TEXAS

Rusk County, Tex.* (Apr. 6, 1931) ....$ .25
East Texas (May 9, 1931)‡ ..... .40
Corsicana heavy (Apr. 23, 1931)† ..... .38
Other fields.....See gravity table

*Posted by Panola Pipe Line Co. For Humble Oil & Refining Co. and Magnolia Petroleum Co. posted prices on East Texas, see gravity table. †Magnolia Petroleum Co. ‡Tidal Refining Co.

TEXAS PANHANDLE

Gray County, Wheeler County and Carson-Hutchinson Counties..See gravity table

WEST TEXAS

Iatan*.....Same as North Texas
Crane-Upton-Crockett, Howard and Glasscock and Ector (Apr. 21, 1931)†.$ .30
Winkler and Pecos, Tex. (Apr. 21, 1931)† .35
Lea County, N. Mex. (Apr. 21, 1931).. .325

*Includes Westbrook Field. †Posted by Humble Oil & Refining Co.

ARKANSAS-NORTH LOUISIANA

Smackover (all grades) (Mar. 10, 1931) .$ .45
Carterville, Sarepta and Cotton Valley, below 36 gravity.....See gravity table
March 10, 1931 ..... .45
Urania (Oct. 30, 1930)..... .75
Callon, heavy (Mar. 10, 1931)..... .45
East El Dorado (Mar. 10, 1931)..... .45
Other fields.....See gravity table

Note—Smackover and Bellevue posted by Standard Oil Co. of Louisiana and Magnolia Petroleum Co.; Urania posted by Louisiana Oil Refining Corp.; East El Dorado posted by Gulf Refining Co. and Magnolia Petroleum Co.; Callon posted by Gulf Refining Co.

GULF COAST

Grade A (Apr. 21)*.....$ .70
Grade B, 25° and upward—See gravity table
Jennings, La. (Apr. 21, 1931)†..... .75
Refugio, light.....Same as Grade B
Refugio, heavy (Jan. 14)*..... .69
Markham (Mar. 10, 1931)‡..... .50
High Island (Apr. 21, 1931)†..... .65
Hankamer (Apr. 21, 1931)†..... .65

*Humble Oil & Refining Co. †Gulf Refining Co. of Louisiana. ‡Texas Pipe Line Co.

ROCKY MOUNTAIN STATES

Ohio Oil Co.-Midwest Refining Co.

Iles (Mar. 7, 1931):
33 gravity and above.....$ .72
Under 33 gravity ..... .50
Fort Collins (Mar. 5, 1931)..... .58
Florence (Mar. 5, 1931)..... .47
Wellington (Mar. 5, 1931)..... .48
Dutton Creek (Oct. 28, 1930)..... 1.01
Rock Creek, Wyo. (Mar. 5, 1931)..... .66
Salt Creek.....See gravity table
Big Muddy (Mar. 5, 1931)..... .65
Grass Creek, heavy (July 27, 1928)..... .90
Grass Creek, light (Mar. 5, 1931)..... .90
Elk Basin (Mar. 5, 1931)..... .90
Lance Creek (Mar. 5, 1931)..... .98
Poison Spider (Mar. 5, 1931)..... .70
Notches (Mar. 14, 1927)..... .65
Hudson (Mar. 5, 1931)..... .35
Lander (Mar. 5, 1931)..... .40
Rex Lake (Feb. 22, 1930)..... 1.10
Osage (Apr. 15, 1931)..... .93
Lost Soldier (Mar. 5, 1931)..... .55
Hamilton Dome (Mar. 14, 1927)..... .85
Greybull (Oct. 28, 1930)..... 1.26
Torchlight (Oct. 28, 1930)..... 1.26
Cat Creek (Mar. 5, 1931)..... .90
Pondera, Mont. (Mar. 12, 1931)..... 1.00
Sunburst, Mont. (Mar. 12, 1931)..... 1.10
Hogback, N. Mex. (Mar. 5, 1931)..... 1.05
Artesia, N. Mex. (Mar. 10, 1931)..... .40
Lea County, N. Mex. (Apr. 21, 1931)..... .325
Border, Mont. 1.55
Red Coulee, Alberta 1.55

Note—Salt Creek, Cat Creek, Dallas-Derby, Hudson, Greybull and Hogback posted by Midwest Refining Co. and the remainder by the Ohio Oil Co. Both companies posted Grass Creek light and Elk Basin. Lost Soldier posted by Producers & Refiners Corp. Artesia posted by Continental Oil Co. Border and Red Coulee posted by Imperial Refining Co. Ohio Oil Co. ceased posting Artesia on March 5, 1931. Lea County posted by Humble Oil & Refining Co. Fort Collins, Wellington, Orchard, Florence, Rattlesnake and Table Mesa by the Continental Oil Co. Osage posted by Arro Oil & Refining Co.

SOUTH CENTRAL AND SOUTHWEST TEXAS

Darst Creek (Apr. 21, 1931)*.....$ .53
Luling (Apr. 23, 1931)† ..... .38
Mirando (Apr. 21, 1931)* ..... .60
Pettus (Apr. 21, 1931)*..... .75
Salt Flat (Apr. 21, 1931)*..... .53
Thrall‡ ....
Lytton Springs (Lockhart) .See gravity table
Dobrowolski (Oct. 25, 1930)‖.....
Same as Mid-Continent gravity scale up to and including 38-38.9° at..... 1.01
Somerset (Oct. 25, 1929)¶.....
Same as Mid-Continent gravity scale up to and including 38-38.9° at..... 1.01

*Posted by Humble Oil & Refining Co. †Magnolia Petroleum Co. ‡Thrall prices same as North Central Texas less 19½ cents per cwt. freight. ‖Grayburg Oil & Refining Co., Pioneer Oil & Refining Co. and Texas Petroleum Products Co. ‖Pioneer Oil & Refining Co.

EASTERN STATES

Joseph Seep Purchasing Agency
(Effective April 23, 1931)
Penna Grade Oil in National Transit Lines (Pennsylvania) $1.75

(Continued on Page 110)

CRUDE OIL GRAVITY TABLE

	Oklahoma, Kansas, East Central Texas	Hanger, North Texas and Cooke County, Texas	East Texas	North Louisiana and Arkansas	Carson and Hutchinson Counties, Texas	Gray County, Texas	Grade B Gulf Coast and Refugio, Texas	Salt Creek, Wyoming	Stephens, Arkansas
	1	2	3	4	5	6	7	8	9
Below 25	....	....	....	....	....	....	.60	....	....
25 to 25.9	....	....	....	....	....	....	.61	....	....
26 to 26.9	....	....	....	....	....	....	.63	....	....
27 to 27.9	....	....	....	....	....	....	.65	....	....
28 to 28.9	....	....	....	....	....	....	.67	....	....
Below 29	.43	.33	.25	.43	....	....	....	....	.54
29 to 29.9	.45	.35	.25	.45	....	....	.69	.45	.58
30 to 30.9	.47	.37	.25	.47	....	....	.71	.47	.62
31 to 31.9	.49	.39	.25	.49	....	....	.73	.49	.66
32 to 32.9	.51	.41	.25	.51	....	....	.75	.51	.70
33 to 33.9	.53	.43	.25	.53	....	....	.77	.53	....
34 to 34.9	.55	.45	.25	.55	.30	.33	.79	.55	....
35 to 35.9	.57	.47	.27	.57	.32	.35	.81	.57	....
36 to 36.9	.59	.49	.29	.59	.34	.37	....	.59	....
37 to 37.9	.61	.51	.31	.61	.36	.39	....	.61	....
38 to 38.9	.63	.53	.33	.63	.38	.41	....	....	....
39 to 39.9	.65	.55	.35	.65	.40	.43	....	....	....
40 and above	.67	.57	.37	.67	.42	.45	....	....	....

Column 1—Stanolind Crude Oil Purchasing Co. posted above prices on March 5, effective in Kansas, Oklahoma and East Central Texas, where it purchases oil. Magnolia Petroleum Co. posted same day but with these differences: Below 26 degrees, 40 cents; 26-26.9 degrees, 41 cents; 27-27.9 degrees, 42 cents; 28-28.9 degrees, 43 cents. Tidal Refining Co. and Tidal-Western Oil Corp. adopted new price schedule March 6. Mid-Continent Petroleum Corp., Continental Oil Co., H .F. Wilcox Oil & Gas Co., Edson Oil Co., Standard Oil Co. of Kansas, Sinclair Refining Co., White Eagle Oil Corp. and Producers Oil Co. met the price on March 6, Champlin Refining Co. on March 7, Carter Oil Co., The Texas Company, Humble Oil & Refining Co., Empire Pipe Line Co., Gypsy Oil Co. and Gulf Pipe Line Co. met Stanolind prices on March 10, Pure Oil Co. posted same schedule in Van, Texas, Pool, March 5.

Column 2—Posted by Humble Oil & Refining Co., April 21. Met by Stanolind Crude Oil Purchasing Co., Gulf Pipe Line Co., Tidal Western Oil Co., Continental Oil Co., April 21. By The Texas Company and Magnolia Petroleum Co., April 23. Effective May 9, 1931, in Wichita County only, the Tidal Western Oil Corp. posted a new price schedule as follows: Below 34 degrees, 33 cents; 34 degrees, 35 cents, with 2 cents added for each degree up to and including 40 degrees and above at 47 cents.

Column 3—Posted by Humble Oil & Refining Co., Gulf Pipe Line Co., The Texas Company, Sinclair Refining Co. on May 26, 1931. Magnolia Petroleum Co. and Arkansas Fuel Oil Co. still posting Oklahoma-Kansas price schedule.

Column 4—Standard Oil Co. of Louisiana and The Texas Company posted March 10. Standard prices apply to Caddo, Homer, Haynesville, Bull Bayou, Sabine, Crichton, De Soto, El Dorado, Cotton Valley, Sarepta and Carterville.

Column 5—Humble Oil & Refining Co., April 21. Other buyers met price effective April 21.

Column 6—Humble Oil & Refining Co., March 21. Other buyers met price effective April 21.

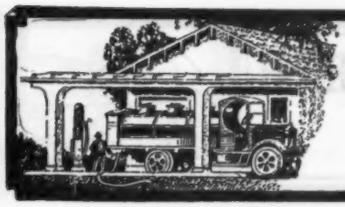
Column 7—Humble Oil & Refining Co., March 21. Gulf Pipe Line Co. met price effective April 21.

CALIFORNIA CRUDE OIL PRICES

(Posted by Union Oil Co. March 30 and the Standard Oil Co. of California March 31)

	Alamitos Hts., Signal Hill, Seal Beach, Torrance, Athens, Rosecrans, Dominguez, Santa Fe Springs, Montebello, Huntington Beach, East Coyote, Richfield, Brea-Olinda	Santa Paula	Orcutt	Coalinga, McKittrick, Kern River, Midway-Sunset, Elk Hills, Buena Vista Hills, Lost Hills
11 to 13.9	....	....	....	$.50
14 to 14.9	$.65	$.60	$.55	.55
15 to 15.9	.65	.60	.55	.55
16 to 16.9	.65	.60	.55	.55
17 to 17.9	.65	.60	.55	.55
18 to 18.9	.65	.60	.55	.55
19 to 19.9	.65	.60	.55	.55
20 to 20.9	.65	.58	.53	.53
21 to 21.9	.62	.56	.51	.51
22 to 22.9	.59	.53	.49	.49
23 to 23.9	.56	.50	.47	.47
24 to 24.9	.53	.47	.45	.45
25 to 25.9	.50	.44	.43	.43
26 to 26.9	.47	.41	.41	.41
27 to 27.9	.44	.38	.39	.39
28 to 28.9	.41	.35	.37	.37
29 to 29.9	.38	....	.35	.35
30 to 30.9	.35	....	....	....

For the time being the Union Oil Co. and the Standard Oil Co. will not post a schedule of crude oil prices for the Playa del Rey and Kettleman Hills Fields.



TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns May 26

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Chicago	14.0	14.0	3.0	9.0
Decatur, Ill.	14.4	14.4	3.0	9.0
E. St. Louis	13.7	13.7	3.0	8.2
Joliet	14.4	14.4	3.0	9.0
Peoria	14.4	14.4	3.0	9.0
Quincy	14.2	14.2	3.0	8.8
Davenport, Ia.	14.5	14.5	3.0	9.3
Des Moines	14.5	14.5	3.0	9.3
Keokuk	14.5	14.5	3.0	9.3
Sioux City	14.1	14.1	3.0	8.9
Duluth, Minn.	15.5	15.5	3.0	9.9
Mankato	15.1	15.1	3.0	9.7
Minneapolis	15.2	15.2	3.0	9.9
La Crosse, Wis.	16.2	16.2	4.0	10.0
Milwaukee	15.1	15.1	4.0	8.9
Madison	15.3	15.3	4.0	9.1
Detroit, Mich.	14.8	14.8	3.0	10.7
Grand Rapids	14.7	14.7	3.0	10.6
Saginaw	14.9	14.9	3.0	10.8
Evansville, Ind.	15.1	15.1	4.0	9.9
Indianapolis	15.3	15.3	4.0	10.1
South Bend	15.4	15.4	4.0	10.3
Fargo, N. D.	16.9	16.9	3.0	11.0
Huron, S. D.	16.3	16.3	4.0	10.7
Sioux Falls	15.8	15.8	4.0	10.4
K. C., Mo.	13.9	13.9	3.0	7.6
Springfield*	13.9	13.9	3.0	8.5
St. Louis*	12.9	12.9	2.5	8.3
St. Joseph	13.5	13.5	3.0	7.5
Wichita, Kans.	12.8	12.8	3.0	7.8
Bartlesville, Ok.	13.0	16.0	5.0	7.5

*State tax 2 cents, remainder city tax.

A third grade of gasoline, "Stanolind Blue," is sold at all major points at a price 2 cents or more below the price on the regular grade.

Effective April 15—Discounts on Q.D.A. on 1,000 gallons or more per month throughout territory: Red Crown Ethyl gasoline, 3 cents off tank wagon price; Red Crown gasoline, 2½ cents off tank wagon price; Stanolind Blue gasoline, 1 cent off tank wagon price.

Discount in Chicago division on 1,000 gallons or more per month: Red Crown Ethyl gasoline, 4 cents off tank wagon price; Red Crown gasoline, 3½ cents off tank wagon price; Stanolind Blue gasoline, 2 cents off tank wagon price.

Discounts on resellers authorized agent's agreement: Same amounts as above except made off service station price instead of tank wagon price.

PACIFIC COAST TERRITORY

	Gasoline			Kero.
	Wh'ls'e price	Retail* price	Incl'ds tax of	tank wagon
Fresno	14.0	11.0	3.0	17.0
San Francisco	14.0	11.0	3.0	15.5
Los Angeles	13.5	10.5	3.0	15.5
Reno, Nev.	22.0	20.0	4.0	19.0
Portland, Ore.	16.5	12.5	4.0	16.5
Seattle, Wash.	16.0	13.0	5.0	16.5
Tacoma	16.0	13.0	5.0	16.5
Spokane	22.0	19.0	5.0	20.5
Phoenix, Ariz.	16.5	18.0	5.0	20.0

Above prices are at company's plant or depots as company does not operate stations. A 6-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 3 cents plus a 3-cent special temporary discount subject to withdrawal at any time.

*Retail prices posted by Standard Stations, Inc., a subsidiary.

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Dallas, Tex.	13.0	16.0	4.0	10.0
Fort Worth	12.0	14.0	4.0	10.0
Houston	14.0	18.0	4.0	11.0
San Antonio	14.0	18.0	4.0	10.0
El Paso	14.0	18.0	4.0	13.0
Texarkana	16.0	16.0	4.0	11.0
Muskogee, Ok.	13.0	16.0	5.0	8.0
Okla. City	10.0	11.0	5.0	8.0
Tulsa	10.0	11.0	5.0	8.0
Ft. Smith, Ark.	15.5	16.5	5.0	11.0
Little Rock	16.5	17.5	6.0	11.0

One-cent rebate made from posted station prices to cash purchasers in Louisiana, Arkansas and Tennessee.

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Albany, N. Y.	16.5	17.5	3.0	15.6
New York*	15.3	15.3	3.0	14.3
Buffalo	15.8	15.8	3.0	14.8
Rochester	16.0	16.0	3.0	14.0
Syracuse	15.8	16.8	3.0	14.8
Boston, Mass.	16.5	16.5	3.0	13.5
Augusta, Me.	15.8	15.8	4.0	14.3
Manch'tr, N. H.	15.4	15.4	4.0	14.0
Burlington, Vt.	19.3	19.3	4.0	15.3

*Prices in steel barrels.

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atlanta, Ga.	15.0	16.0	6.0	13.5
Augusta	16.0	20.0	6.0	14.0
Macon	15.0	18.0	6.0	13.0
Savannah	15.0	18.0	6.0	13.0
Birm'ham, Ala.	17.0	19.0	5.0	13.0
Mobile	17.0	19.0	4.0	13.0
Montgomery	17.0	17.0	4.0	13.5
Clarks'le, Miss.	18.0	20.0	5.0	13.5
Jackson	16.0	18.0	5.0	11.0
Natchez	18.0	20.0	5.0	13.5
Gulfport	16.0	16.0	5.0	13.5
Vicksburg	16.0	18.0	5.0	11.0
Jack'ville, Fla.	15.0	17.0	6.0	13.0
Miami	18.0	20.0	6.0	13.0
Pensacola	16.0	18.0	6.0	13.0
Tampa	19.0	19.0	5.0	12.0
Lexington, Ky.	17.0	18.0	5.0	12.0
Covington	16.0	17.0	5.0	11.0
Louisville	16.0	17.0	5.0	11.0
Ashland	17.0	19.0	5.0	13.0
Paducah	17.0	18.0	5.0	11.0
Bowling green	19.0	21.0	5.0	14.5
Corbin	18.0	19.0	5.0	15.0

A third grade, "Kyso Green," is sold at a price generally 3 cents below the price on the regular grade.

In addition to the state tax of 4 cents on gasoline, Montgomery has city tax of 1 cent on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene and one-fourth cent on gasoline. To Pensacola, Montgomery, Birmingham and Mobile state taxes add 1-cent levy tax. To Gulfport state tax add privilege tax of 2 cents.

Effective April 2, price to dealers 2 cents under posted tank wagon price.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
N. Orleans, La.	15.5	15.5	6.0	12.0
Baton Rouge	15.0	16.0	5.0	12.0
Alexandria†	16.0	17.0	6.0	12.0
Lafayette*	16.0	17.0	6.0	12.0
Lake Charles*	16.0	17.0	6.0	12.0
Shreveport	15.0	16.0	5.0	12.0
Knoxville, Tenn.	17.5	18.5	5.0	13.5
Memphis	13.0	14.0	5.0	10.0
Chatanooga	17.0	18.0	5.0	13.0
Nashville	16.5	17.5	5.0	12.5
Bristol	18.0	19.0	5.0	14.0
Lt. Rock, Ark.	16.0	17.0	6.0	11.0

*Includes city tax of 1 cent. Louisiana kerosene prices include 1-cent state tax. New Orleans kerosene price also includes 1-cent city tax.

†Gasoline price at Alexandria includes 1-cent tax in parish of Rapides.

Two-cent discount off gasoline tank wagon price to dealers and commercial accounts.

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Omaha	12.9	12.9	4.0	9.25
McCook	16.00	17.75	4.0	10.75
Norfolk	15.75	16.75	4.0	9.75
N. Platte	16.75	17.75	4.0	10.50
Scottsbluff	16.00	16.00	4.0	10.25

Note—Dealers' discounts allowed as follows: Red Crown Ethyl, 3 cents off station price; Red Crown, 2½ cents off station price; third grade, 1 cent off station price.

OHIO

Standard Oil Co. (Ohio)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Ohio points*	15.0	16.0	4.0	†13.0

*Dealers and commercial accounts 2 cents under tank wagon.

†Service station price 14 cents.

NAPHTHA

	Tank wagon	Tank car
Oleum spirits	12.0	8.0
V.M.&P. naphtha	14.0	9.5
Cleaners' naphtha	16.2	11.0
Stanisol	16.2	11.0

Tank wagon prices f.o.b. Chicago; tank car prices f.o.b. Whiting.

STANOLIND FURNACE OIL IN CHICAGO

All dumps of 50 gallons or more..... .07

Note—Outside Chicago furnace oils discount of 1 cent per gallon is given on deliveries of 100 to 349 gallons and 1½ cents on deliveries of 350 gallons or more.

PENNSYLVANIA-DELAWARE AND PART OF NEW ENGLAND

Atlantic Refining Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Pittsburgh, Pa.	*12.0	*14.0	...	12.0
Philadelphia	*12.0	*14.0	...	13.0
Scranton	*12.0	*14.0	...	12.0
Allentown	*13.0	*14.0	...	13.0
Altoona	*12.0	*14.0	...	12.0
Erie	*12.0	*14.0	...	12.0
Dover, Del.	15.0	17.0	3.0	12.0
Wilmington	15.0	17.0	3.0	13.0
Springf'd, Mass.	14.5	16.5	2.0	11.0
Fall River	14.1	16.1	...	11.0
Worcester	14.3	16.3	2.0	11.0
Boston	13.5	15.5	2.0	11.0
Providence, R.I.	13.7	15.7	2.0	11.0
Hartford, Conn.	14.5	16.5	2.0	10.0
New Haven	14.6	16.6	2.0	10.0

*Does not include tax of 3 cents in Pennsylvania. Pennsylvania tax is collected by the dealer and paid by him direct to the State. Atlantic Refining Co. recognizes a 2-cent per gallon discount on gasoline from its posted tank wagon markets on sales to dealers for purpose of resale. Atlantic Refining Co. also recognizes a maximum discount of 2 cents per gallon on gasoline to commercial accounts under contract for one year.

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atl'tic City, N.J.	13.7	15.7	3.0	11.5
Newark	12.7	14.7	3.0	10.5
Annapolis, Md.	15.2	16.2	4.0	11.0
Baltimore	14.4	15.4	4.0	8.5
Cumberland	16.2	17.2	4.0	12.0
Wash'gton, D.C.	12.9	13.9	3.0	10.0
Danville, Va.	17.0	18.0	5.0	11.3
Norfolk	15.5	16.5	5.0	10.0
Petersburg	16.5	17.5	5.0	11.3
Richmond	15.9	16.9	5.0	10.7
Roanoke	17.2	18.2	5.0	12.0
Charles'n, W.Va.	15.7	16.7	4.0	11.5
Keyser	16.3	17.3	4.0	12.1
Parkersburg	15.4	16.4	4.0	10.3
Wheeling	15.6	16.6	4.0	11.4
Charlotte, N. C.	18.5	19.5	6.0	11.0
Hickory	18.8	19.8	6.0	12.6
Mt. Airy	18.7	19.7	6.0	12.5
Raleigh	18.4	19.4	6.0	12.2
Salisbury	18.7	19.7	6.0	12.5
Charleston, S.C.	16.5	17.5	6.0	10.3
Columbia	18.4	19.4	6.0	12.2

A 2-cent per gallon discount off the gasoline tank wagon price is offered to dealers, except in Washington, D. C., and in Maryland where discount is 3 cents.

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Denver, Colo.	15.0	18.0	4.0	13.5
Pueblo	14.0	17.0	4.0	12.0
Grand Junction	16.0	19.0	4.0	14.5
Casper, Wyo.	15.0	18.0	4.0	10.0
Cheyenne	16.0	19.0	4.0	11.5
Butte, Mont.	17.0	20.0	5.0	16.0
Billings	20.0	23.0	5.0	14.5
Great Falls	20.0	23.0	5.0	16.0
Helena	20.0	23.0	5.0	16.0
S'lt Lake, Utah	17.5	20.5	4.0	16.0
Albu'que, N. M.	16.0	20.0	5.0	14.0
Boise, Idaho	18.0	21.0	5.0	15.0
Twin Falls‡	20.5	....	5.0	18.0

‡Less 3½ cents.

CRUDE OIL PRICE CHANGES

Effective May 26 the Humble Oil & Refining Co., followed by the Gulf Pipe Line Co., The Texas Company and the Sinclair Refining Co. made a change in the East Texas price schedule. The new prices start at 25 cents per barrel for crude below 35°; 37 cents for 35 gravity, with 2 cents added for each degree upward to 40° and above, which is posted at 37 cents. It is a 30-cent cut on all the grades produced in the East Texas area.

American Refining Co. of Wichita Falls, Tex., posted a price effective May 22 in northern Texas of 55 cents a barrel, less carrying charges; for southern Oklahoma crude 31° and below 30 cents with a 2-cent differential up to 39° at 48 cents.

Rock Island Refining Co. of Duncan, Okla., posted the following crude prices effective May 26, in Oklahoma: Below 26°, 30 cents, 26-26.9, 31 cents, 27-27.9, 32 cents, 28-28.9, 33 cents, and a 2-cent differential to 40° and above, 57 cents.

TANK WAGON CHANGES

Standard Oil Co. of Louisiana reduced the tank wagon and station prices on gasoline one-half cent throughout its territory except New Orleans and Memphis on May 20.

Standard Oil Co. (New Jersey) reduced the kerosene price 1 cent in Baltimore, Md.

Standard Oil Co. (Kentucky) advanced the gasoline station price to 19 cents in Tampa, Fla., April 29. On May 2 it was reduced to 17 cents and on May 18 the tank wagon and station prices were advanced to 19 cents each. On May 17 the gasoline tank wagon price was advanced to 16 cents and the station price to 18 cents in Jackson, Miss.

MAGNOLIA MEETS HUMBLE PRICE

DALLAS, Texas, May 26.—The Magnolia Petroleum Co. late today met the Humble Oil & Refining Co.'s new price schedule in East Texas, announced this morning. These prices were: Below 35 gravity, 25 cents; 35 gravity, 27 cents, with 2 cents added for each degree upward to 40 and above at 37 cents.

ANOTHER PRORATION STUDY

DALLAS, Tex., May 25.—A study of oil proration will be made by the East Texas Chamber of Commerce, directors of the organization decided today.

STANOLIND MOVES OFFICES

The Stanolind Crude Oil Purchasing Co. and the Stanolind Pipe Line Co., which are now located in the Sinclair Building at Fifth and Main Streets, Tulsa, will move to their new quarters in the Philcade Building June 1. The Stanolind Crude Oil Purchasing Co. expects to be located on the eleventh floor of the Philcade Building and the pipe line company on the twelfth floor. Several new floors have been added to the Philcade Building to house the entire Stanolind organization under one roof. The Stanolind Oil & Gas Co. has offices in the same building.

CRUDE OIL PRICES

(Continued from Page 109)

Pennsylvania Grade Oil in Southwest Pennsylvania Lines (Apr. 27, 1931)	1.60
Penna. Grade Oil in Eureka Pipe Line Lines (West Virginia)	1.50
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio) (Sept. 14, 1930)	1.25
Corning Grade Oil in Buckeye Pipe Line Co.'s Line (Mar. 11, 1931)	.80
Ragland Grade Oil in Cumberland Pipe Lines (Kentucky)	1.10
Wayne District Oil in Cumberland Pipe Lines	1.17

Tide Water Pipe Co.

Bradford district (Apr. 23, 1931)	$2.00
Allegany district (Apr. 23, 1931)	2.00

Pure Oil Co.

Cabin Creek, W. Va. (Apr. 23, 1931)	$1.50
Kelly Creek, W. Va. (Apr. 23, 1931)	1.50
Bradford Hollow, W. Va. (Apr. 23, 1931)	1.50

MIDDLE WESTERN STATES

Ohio Oil Co.
(Effective March 6, 1931)

Lima	$ .90
Wooster	.90
Illinois	.80
Indiana	.80
Princeton	.80
Plymouth	shut in
Western Kentucky	.75
Midland, Mich.* (Mar. 13, 1931)	.75
Dundee, Mich. (Oct. 26)†	
.....Same as Mid-Continent gravity scale	
Upper and Lower Traverse Sands, Mich. (Oct. 28, 1930)†	
.....Same as Mid-Continent gravity scale	
Cumberland, Clay, Barren, Clinton and Monroe Counties, Kentucky (Oct. 28)‡	.85
Oil City, Ky. (Apr. 1, 1931)§	.60
Oil Springs (Canada) (Oct. 28)†	1.57
Petrolia (Canada) (Oct. 28)†	1.50
Alberta (Canada)‖:	
50° and above (Mar. 1, 1931)	1.36
45 to 45.9° (Mar. 1, 1931)	1.37

*Posted by Pure Oil Co. †Posted by Standard of Indiana for boat shipment. ‡Posted by Paragon Development Co. §Posted by Stoll Refining Co. ‖Posted by Imperial Oil, Ltd. †Posted by Imperial Oil, Ltd., and Regal Oil & Refining Co. of Calgary.

MEXICAN CRUDE

Panuco*	$ .40

*F.o.b. ship, based on April transactions and exclusive of taxes and bar dues.

Of Interest to Sales Departments

Report Division of Dollar in Sales to Gasoline Consumer

Approximately 50 cents out of each $1 expended by the American motorist for gasoline represents the combined cost of crude oil and the expense and profit of refining, according to data presented in a study just completed by the United States Commerce Department covering the petroleum industry of the Gulf Southwest. The data are based on prices which prevailed last year. The producers and refiners' share of the retail price is now substantially less than 50 per cent.

As priced at the refineries gasoline production in the United States, exclusive of natural gasoline, had a total value of more than $1,579,000,000 in 1929, the Census of Manufactures reveals. Further analyzed, the average dollar expended for motor fuel throughout the country shows a trifle less than 23 cents as the share of cost due to wholesaling, and 7 cents as the proportion representing transportation charges. Of the approximately 20 cents remaining, 10 cents on the average, it is estimated, is paid out for gasoline taxes, while an equal amount remains as the margin of the gasoline retailer.

The various factors entering into the cost of gasoline to the automobilist differ widely in different parts of the country, it is pointed out, depending upon a number of circumstances such as distance from refinery to point of sale, cost of crude oil at the refinery, type of refining process used, amount of state gas tax and other items. On the whole, however, the proportions shown are considered to be representative of the relative distribution of the gasoline dollar for the country at large.

Shown in Percentages

Expressed in percentages of the nation's total retail gasoline bill, the various cost factors as shown in the petroleum report are as follows: Cost of crude oil at the refinery, 24.3 per cent; cost of refining and selling and refinery profit, 25.7 per cent; expense and profit of wholesaling, 22.8 per cent; transportation, 7 per cent; gas tax, 10.1 per cent; and retail margin, 10.1 per cent.

Retail gasoline outlets of all types, according to the newest figures available at the time the survey was made, numbered approximately 317,000 for the country as a whole. These were equipped with 614,000 pumps and represented an investment of $838,000,000.

The figures for retail gasoline costs and outlets are presented as part of a general review of production processes, and marketing and transportation methods in the oil industry of the Gulf Southwest. This area, it is shown, has a substantially greater number of gas stations in proportion to the number of automobiles in use than the rest of the United States.

ALBERTA GASOLINE TAX

CHATHAM, Ontario, May 23.—Hon. O. L. McPherson, minister of public works for Alberta, officially states that the Alberta government has no intention of increasing the provincial gasoline tax from 5 cents to 8 cents this year.

COLONIAL BUYS SYLVESTER

The Colonial Beacon Oil Co., a subsidiary of the Standard Oil Co. of New Jersey, has acquired additional stock in the Sylvester Utilities Co. The Colonial company now has a controlling stock interest. The Sylvester Utilities through its subsidiaries is a large distributor of furnace and fuel oils in New York City.

HOW TO LOSE GALLONAGE IN MARKETING PRODUCTS

Kentucky Oil Bulletin*

1. Let the station have a dirty and ill-kept appearance. Be sure that the attendants get plenty of rest between customer visits and keep up on all the latest current newspaper and magazine literature.

2. Never clean the rest rooms. Do not provide soap or towels, but if you do, be sure the supply is allowed to become exhausted frequently.

3. Instruct the attendants never to assist in serving a customer. The customer likes to see extra attendants enjoy their leisure, even if he is in a hurry to have his car serviced.

4. Insist that attendants drop or spill some gasoline or oil on the finish of each car served. The resultant dust catching spots will serve to keep your station in the customer's mind.

5. Do not permit attendants to clean customer's windshield or other glass, but if you do permit it, provide only dirty greasy rags that will smear the glass. Under no circumstances provide a wet sponge and chamois.

6. Allow customers to inflate their own tires. Never suggest that the air pressure be checked. Only have one tire gauge at each station and be sure it is misplaced most of the time.

7. Do not allow attendants to wear clean uniforms. Dirty worn out clothes should always be used. Customers will seldom be persuaded to pass up your stations if attendants are always neat and clean.

8. Never conspicuously post your delivery prices at the pumps. Such price postings will tend to assure the customer he is buying at the right price, and he may keep coming back.

9. Be sure to give confidential discounts to certain preferred customers. They will tell their friends who will become dissatisfied, and they will tell your

(Continued on Page 115)

*Published by Kentucky Oil Marketers Association.

1932 FUEL OIL BRINGS AVERAGE OF 82 CENTS

WASHINGTON, D. C., May 23.—The Navy Department has awarded contracts for 2,014,150 bbls. of fuel oil to be delivered at several points along the Atlantic Coast during 1932. The fuel oil brought an average price of 82 cents per barrel for a total of $1,750,063.25.

All awards were made to the lowest bidder as required by law and with the stipulation that the oil should be produced in the United States or its possessions. The contracts awarded were as follows:

Bunker fuel oil, Grade A—Magnolia Petroleum Co., 912,500 bbls., $594,000; Standard Oil Co. of New Jersey, 900 bbls., $1,458; Warner-Quinlan, 25,000 bbls., $28,000; Colonial Beacon Oil Co., 170,000 bbls., $211,650; Gulf Refining Co., 241,000 bbls., $242,196.35. Total, 1,349,000 bbls. at $1,077,304.35.

Bunker fuel oil, Grade C—Magnolia Petroleum Co., 94,000 bbls., $61,670; Shell Petroleum Corp., 67,000 bbls., $36,825; Standard Oil Co. of New Jersey, 30,000 bbls., $24,000; Atlantic Refining Co., 35,250 bbls., $35,225; Standard Oil Co. of New York, 55,000 bbls., $59,000; Cities Service, 40,000 bbls., $42,664; Gulf Refining Co., 230,000 bbls., $210,900. Total, 551,250 bbls. at $470,284.

Fuel oil for Diesel engines—Sinclair Refining Co., 23,500 bbls., $38,084.90; Continental Oil Co., 40,000 bbls., $73,200; Tidewater Oil Co., 34,000 bbls., $58,850; Colonial Beacon Oil Co., 16,000 bbls., $32,340. Total, 113,500 bbls. at $202,474.90.

ILLEGAL PRACTICES IN FARMER TAX EXEMPTION

Two practices which have been become quite general in the handling of farmer exemptions of gasoline taxes are illegal in Minnesota and North Dakota, according to opinions obtained from state officials by the Northwest Petroleum Association.

The questions asked were as follows: "1. Is it proper for an oil company selling gasoline to a farmer to bill the farmer for the price of the gasoline plus the tax, charge only the cost of the gasoline, and in place of taking money for the tax to take an assignment of a refund claim? In other words, do you recognize assignments of gasoline tax refund claims?

"2. Is it proper for an oil company to sell gasoline to a farmer, bill him for the price plus tax, collect only the price of the gasoline, and take a refund claim, with the understanding that when the refund check is received by the farmer it will be turned over to the oil company?"

In reply to these questions the chief oil inspector of Minnesota says: "Your questions are answered in the negative. . . . We do not make checks for refundment of gasoline tax payable to any other person than the claimants, and we do not approve of dealers taking assignments."

The North Dakota deputy state auditor replied as follows: "Neither of the propositions are legal and where we find that it is being done we will refuse to refund and the company will be out the tax. We do not recognize assignments but have made a few exceptions in cases where the equities seem to demand protection for the dealer, but will stop if we find they are abusing the privilege."

KANSAS STANDARD WILL ENTER RETAIL MARKETS

The Supreme Court of Kansas modified an order of several years' standing last week which will permit the Standard Oil Co. of Kansas to enter the retail distribution of the oil business. The modification which related to an order issued by the court in June, 1921, in limited ouster proceedings instituted by the State's attorney general office was issued by the court on application of the Standard Oil Co. of Kansas.

The company predicated its application upon changes in the oil industry which it contended has resulted in practically every retailer in petroleum products also operating, controlling or holding a financial interest in a refinery so that purchases from other refiners have been greatly reduced.

Officials of the Standard of Kansas have not announced their plans for entering the retail field. The company, which operates a 20,000-bbl. refinery at Neodesha, Kans., formerly sold the bulk of its gasoline output through long-time contracts to the Standard Oil Co. of Indiana. These products were distributed in the Kansas and Missouri stations of the Indiana Standard.

The Standard of Kansas over the past two years has been expanding its activities. Formerly the company secured its crude oil from the Prairie Oil & Gas Co. The company now operates its own pipe line system and also is engaged in crude oil production through a subsidiary.

CIGAR SALES INCREASING

Sales of cigars at filling stations along the Atlantic Seaboard are rapidly increasing, according to John T. Reese, a manufacturer. The 5 and 10-cent cigars are the popular brands.

Position of United States in Gasoline Exports Declining

By Charles E. Kern

Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., May 23.—The extent to which the United States has fallen off as an exporter of gasoline during the last four years compared with eight other major producing countries is shown in a compilation just made by Dr. John W. Frey, Chief of the Petroleum Section, Bureau of Foreign and Domestic Commerce.

While it is true that the United States still holds the position of the largest exporter of gasoline the percentage of its exports has fallen from 62.42 per cent in 1927 to 49.10 per cent in 1930. During this period its volume in the exportation of gasoline was increased from 43,334,164 bbls. to 63,195,331 bbls. in 1930.

Other major countries exporting gasoline were Trinidad, Netherland West Indies, Peru, Russia, Rumania, Persia, Netherland East Indies and Sarawak. All of these exporters of gasoline have come into the picture since 1914. All of them have greatly increased their exports of this product in volume and all except Peru and Trinidad have increased their percentage of the whole quantity exported.

Trinidad in 1927 exported 812,680 bbls. of gasoline, or 1.17 per cent increasing to 1,124,100 bbls., or 1.33 per cent in 1928, to 1,383,611 bbls., or 1.30 per cent in 1929, and to 1,430,547 bbls., or 1.11 per cent in 1930.

The Netherland West Indies exported 3,590,502 bbls., or 5.17 per cent of the total exports of the nine major producing countries in 1927 increasing to 17,031,781 bbls. or 13.23 per cent in 1930. These exports jumped from 9.10 per cent in 1929 to 13.23 per cent in 1930.

Peru exported 2,122,210 bbls. of gasoline or 3.06 per cent of the whole, increased exports in 1928 and decreased in 1929 and in 1930. The quantity in the latter year dropping to 1,724,000 bbls. or 1.34 per cent of the exports of these nine countries. Russia showed a steady increase from 1927 when the quantity was 5,094,698 bbls. or 7.34 per cent until its total reached 11,398,074 bbls. or 8.86 per cent of the whole in 1930. Persia was the banner state in percentage of increase of exports of gasoline starting with 2,759,339 bbls. or 3.97 per cent in 1927 and increasing steadily to 10,510,893 bbls. or 8.17 per cent in 1930. Rumania increased from 4,619,868 bbls. or 6.65 per cent in 1927 to 9,666,000 bbls. or 7.51 per cent in 1931.

The Netherland East Indies in 1927 exported 6,135,856 bbls. or 8.84 per cent and in 1930 its exportation in volume increased to 11,545,426 bbls. or 8.97 per cent of the whole. While it practically doubled these exports its percentage of world exports of gasoline was increased by only a trifling percentage.

Sarawak exported 944,743 bbls. or 1.36 per cent in 1927 and increased to 2,190,000 bbls. or 1.70 per cent in 1930.

SUN ENTERS NOVA SCOTIA

The Sun Oil Co. of Philadelphia has taken over the storage plant of Provincial Oil, Ltd., located at Sydney River in Nova Scotia. Additional facilities are to be acquired. The Sun company also has plans for the construction of a large bulk terminal on the Hudson River at Rensselear, N. Y. The company acquired a 200-acre site and will spend $200,000 in new bulk plant equipment.

Prices Near Bottom Says H. F. Sinclair

Chairman of Sinclair Consolidated Oil Corp. in Annual Report Comments on Decline in Prices

By A. E. Mockler
New York Bureau, The Oil and Gas Journal

NEW YORK, May 25.—H. F. Sinclair, chairman, Sinclair Consolidated Oil Corp., stated at the annual meeting that he believed oil prices were getting very close to the bottom. He said that the consumption of gasoline had increased slightly this year over 1930, but that the industry as a whole, was "not making any money." He does not look for much encouragement in the next quarter.

Due to the fact that it was inequitably administered, Mr. Sinclair said proration had not been successful. Drilling should be stopped, he said, to permit the oversupply of oil to be absorbed. Under present conditions there were too many companies in the industry, he said, and eliminations and consolidations were necessary.

He said with regard to proration: "We have had proration for the past two years, and while the production has been prorated the price has also been prorated, so that I do not think we have accomplished very much by that system."

In response to a question, Mr. Sinclair said negotiations were under way looking to a possible merger of Sinclair, Prairie Oil & Gas Co., Prairie Pipe Line Co. and Tide Water Associated Oil Co. Mr. Sinclair said, however, that negotiations had not passed the preliminary stage. He hinted at the possibility of negotiations involving Rio Grande Oil Co.

Pointing to the severe decline in oil prices, Mr. Sinclair said: "Between February, 1926, and February, 1929, crude declined from $2.04 to $1.20 a barrel, or a reduction of 84 cents. In the same period the average service station price of gasoline declined 1.58 cents a gallon.

"From February, 1929, to April, 1931, there was a decline in the price of crude of 61 cents—from $1.20 to 59 cents. In this same period, however, the retail price of gasoline in the principal metropolitan cities declined 4.09 cents a gallon.

"In other words, a drop of 84 cents in crude between 1926 and 1929 was represented by a decline in gasoline prices of only 1.58 cents, while the later decline of 61 cents in crude was followed by a drop of more than 4 cents in the price of gasoline."

A considerable portion of the price paid by the public for gasoline, Mr. Sinclair said, is going for taxes. The wholesale price of gasoline in the Oklahoma (Group 3) district is less than the average tax of 3.98 cents a gallon in the United States, he said.

W. S. Fitzpatrick, chairman of the board of the Prairie Oil & Gas Co., in reply to a question regarding reports of merger between his company and the Sinclair Consolidated Oil Corp., said: "There are people interested in the stocks of both companies who would like to bring us together. They have not got us together to talk about merger terms as yet."

D. T. Pierce, assistant to the chairman, was elected a director to succeed E. V. R. Thayer. Other directors were re-elected.

Beaty Phillips Director

Amos L. Beaty has been elected a member of the board of the Phillips Petroleum Co. Mr. Beaty has been prominent for 20 years in the oil industry. He was formerly general counsel, president and chairman of The Texas Company, and for years has been treasurer of the American Petroleum Institute.

Interstate Natural Gas

Interstate Natural Gas Co., Inc., in which Standard Oil Co. (New Jersey) owns controlling interest, declared a dividend of 25 cents, payable June 15 to stock of record June 5. An initial dividend of 25 cents was paid on December 15 last year.

Tide Water Associated

Report of Tide Water Associated Oil Co. and subsidiaries for quarter ended March 31, 1931, shows net loss of $191,575 after interest, depreciation, depletion, minority interests, taxes, and other charges. This compares with net income of $2,165,387, equal to 19 cents a share on 5,560,424 no-par common shares in first quarter of 1930, after allowing for dividend requirements on 6 per cent preferred stock.

Associated Oil Co. and subsidiaries report for quarter ended March 31, 1931, net profit of $1,069,244 after interest, depreciation, depletion, Federal taxes, etc., equivalent to 47 cents a share (par $25) on 2,290,412 shares of stock. This compares with $1,740,020 or 76 cents a share in first quarter of 1930.

Tide Water Oil Co. and subsidiaries report for quarter ended March 31, 1931, net loss of $1,145,344 after depreciation, depletion, taxes, minority interests, etc. This compares with net income of $651,165, equal to 18 cents a share on 2,191,820 no-par shares of common stock, in first quarter of 1930, after dividend requirements on 5 per cent preferred stock.

Shell Transport

The final dividend for 1930 of the 7½ per cent or 1 shilling 6 pence on the ordinary shares, recently declared by Shell Transport & Trading Co., Ltd., is payable in London on July 6. The dividend is equivalent to 3 shillings per American share. Rate and date of payment of the dividend in New York will be given out by the Chase National Bank at a later date.

Shell Union Oil

At the annual meeting of Shell Union Oil Corp., J. C. Van Eck, president, stated that the company had liquid funds of $21,000,000, compared with $19,000,000 at the close of March, and $20,000,000, not including $5,000,000 with subsidiaries, on January 31. He stated that capital expenditures have not been large and authorization of drilling expenditures is considerably below a year ago.

R. G. A. Van der Woude was elected a director to succeed U. deB. Daly. Other directors were re-elected. Mr. Van der Woude was recently elected president of Shell Petroleum Corp., succeeding Mr. Daly.

Mr. Van Eck stated that Shell Union has effected several economies which run into a considerable sum in the total. "I expect that our operating expenses this year will be several million dollars smaller than they were in 1930," he said. The second quarter, he said, will not show anywhere near the loss in the first quarter, due to the reduced expenses.

In response to a stockholder's question, Mr. Van Eck said the report for the first quarter this year, which showed net loss of $9,903,472 after all deductions, including depreciation and depletion, which compared with net loss of $3,155,008 in the corresponding quarter of 1930, had been affected to some extent by a mark-down in inventories.

Mr. Van Eck reviewed conditions in the industry, with particular reference to the East Texas oil fields. "There is an effort on the part of the larger companies to keep production in East Texas within limits," he said, "and I am personally very hopeful that if this can be accomplished the production of the United States will be stabilized on a basis that will eliminate the present chaotic conditions. There are no particularly disturbing new fields on the horizon.

"With East Texas prorated, I feel that the situation must rectify itself and that we can look forward believing that we have seen the worst. But if East Texas is not prorated effectively I think that we shall have to ride along another little while under conditions as they now exist."

The tendency among producers in East Texas is for proration, he said, but there are still some that cannot be curtailed. It is possible that before the area is properly prorated a reduction in prices to 40 cents a barrel may be made by those major companies which are now quoting the Mid-Continent schedule in the district, Mr. Van Eck stated.

Creole Petroleum

Report of Creole Petroleum Corp. (controlled by Standard Oil Co. of New Jersey) for year ended December 31, 1930, shows net profit of $1,665,045 after Federal taxes, depreciation, amortization and royalties, equivalent to 25 cents a share on 6,524,391 no-par shares of capital stock. This compares with $2,434,189, or 41 cents a share on 5,977,873 shares in 1929.

The report states that in line with previous practice, the operating losses of subsidiary companies amounting to $1,467,284 for 1930, are not included in the above figures; however, commencing with 1931 a consolidated balance sheet and income statement will be submitted to stockholders.

The company has set in motion a plan for the simplification of the conduct of its business and for effecting economies. It is proposed to make the Standard Oil Co. of Venezuela the operating company with Creole Petroleum Corp. the holding company. Plan involves the ultimate liquidation of and dissolution of three subsidiaries: Webster Syndicate, Condon Oil Co. of Venezuela, and Rio Palmar Oil Fields Corp.

At the close of the year the company and its subsidiaries, E. J. Sadler, presi-

(Continued on Page 118)

STANDARD OIL STOCKS ON NEW YORK CURB

Quotations Compiled by Francis, Bro. & Co., Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.
(Complete record week ending May 16)

1931 High	1931 Low	Week ended May 16 Sales	Week ended May 16 High	Week ended May 16 Low	Close May 20	Stocks—	Outstanding capital	Par value	Div. rate	Last paid	1928 High	1928 Low	1929 High	1929 Low	1930 High	1930 Low
1	⅛	No sales.	..	..	..	Atlantic Lobos	499,448	N.P.	....	5-28-30	..	..	..	..	1	¾
12⅞	7⅛	No sales.	..	..	..	Borne Scrymser	$1,000,000	$25	....	10-15-30	56½	44½	46½	25	25	11¼
51	40	100	46⅝	46⅝	..	Buckeye Pipe Line	$10,000,000	$50	$1Q	3-14-31	76	53	74½	55	69	39⅞
129½	110	100	119	119	115	Chesebrough Mfg.	$3,000,000	$25	$1Q‡	3-31-31	161	117	210	130	184⅞	104¼
3½	2	4,400	2⅛	2	2⅛	Creole Petroleum	5,977,873	N.P.	....	.....	17½	9½	11¾	5⅝	7⅝	3
27	20⅝	No sales.	..	..	23	Cumberland Pipe Line	$1,500,000	$50	50cQ	3-16-31	114	67	75⅝	40	65¾	20¼
31	25¼	No sales.	..	..	25¼	Eureka Pipe Line	$5,000,000	$100	$1Q	5- 1-31	88	64⅛	70½	42	54⅝	26
27⅞	1⅝	No sales.	..	..	..	Galena Signal Oil	$16,000,000	$100	....	.....	13	4¼	6½	3	7	2½
72	52⅜	6,000	53½	52¾	52⅜	Humble Oil & Refining	$74,103,300	$25	50cQ	4- 1-31	114¾	59½	128	74⅛	119	57¼
18¼	10⅞	7,900	13	11⅞	10⅞	Imperial Oil of Canada	25,421,768	N.P.	12½cQ	3- 2-31	104	56¾	41	22	30	15
21⅛	12½	700	14	12½	..	Indiana Pipe Line	$3,000,000	$10	25cQ	5-16-31	91⅞	74⅝	41⅞	26	41	14½
15½	10⅞	18,400	12⅛	11¼	11	International Petroleum	14,247,088	N.P.	25cQ	3-16-31	55	35	30⅝	15	24	11⅜
17½	12¼	700	13¼	12¾	..	National Transit	$6,362,500	$12.50	25cQ§	4-16-31	32⅜	19⅜	25⅛	10⅛	22⅜	11½
14½	9	200	9⅛	9	..	New York Transit	$1,000,000	$10	25cQ	4-15-31	75	38½	17½	10	21⅜	10⅛
30	28	No sales.	..	..	..	Northern Pipe Line	$2,000,000	$50	$2SA	1- 2-31	69	56½	63	41	54	26¼
15½	8	No sales.	..	..	..	Penn Mex Fuel	$10,000,000	$25	....	12-15-30	84	28	44½	20	32	12
8	4	100	4	4	..	Solar Refining	$4,000,000	$25	....	12-20-29	..	..	50	29	33	4⅞
17	10	100	15	15	..	Southern Pipe Line	$1,000,000	$10	50c	3- 2-31	19	15	22½	13	20⅞	8⅝
23⅞	12½	3,800	13⅞	13¼	12¾	South Penn Oil	$30,000,000	$25	25cQ	3-31-31	71⅞	36¾	60¼	35⅛	45⅞	16⅛
38	33	No sales.	..	..	..	Southwest Pennsylvania Pipe Line	$1,750,000	$50	$1Q	3-16-31	102	70	70	60	64	32
38½	24⅜	16,300	20⅞	25½	24⅝	Standard Oil of Indiana	$348,175,069	$25	50cQ	3-16-31	95⅞	70⅞	63	45	59⅜	30
23⅝	17	2,900	18	17	17	Standard Oil of Kentucky	$25,654,516	$10	40cQ	3-31-31	179¾	122¼	46⅞	29	40½	18⅝
36½	23	No sales.	..	..	..	Standard Oil of Nebraska	$4,649,225	$25	50cQ	3-20-31	54⅞	39⅞	50¼	40	48⅞	34⅝
62½	43	350	48	46⅞	43	Standard Oil of Ohio	$14,000,000	$25	62½cQ	4- 1-31	134	71	129	60	108½	43¼
3½	2¾	No sales.	..	..	..	Swan-Finch Co.	$861,466	$25	....	1-15-29	23¼	16	18	10	10	4
69¾	30⅞	17,200	34⅞	31	31⅝	Vacuum Oil Co.	$126,180,350	$25	50cQ	3-20-31	111	72	133¾	75	97⅞	45⅝

*Ex-dividend. †Unit of trading less than 100 shares. ‡Plus 50 cents extra. §Plus 10 cents extra.

INDEPENDENT OILS ON NEW YORK CURB

Quotations Compiled by Francis, Bro. & Co., Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

(Complete record week ending May 16)

1931 High	1931 Low	Week ended May 16 Sales	Week ended May 16 High	Week ended May 16 Low	Close May 20	Stocks—		Outstanding capital	Par value	Div. rate	Last paid	1928 High	1928 Low	1929 High	1929 Low	1930 High	1930 Low
1¾	⅝	3,400	1	¾	⅝	American Maracaibo	(sh)	700,000	N.P.	....	.....	9½	3⅛	8⅝	1⅛	4½	½
16⅞	9⅝	No sales.	..	..	9⅝	British American Oil Corp. (new) coup.		1,311,321	N.P.	20cQ	4- 1-31	55	32¾	62	7⅞	23	13⅜
2⅜	½	300	1¼	1⅛	1	Carib Syndicate		$131,250	25c	....	.....	4½	3⅞	4⅞	1	2¾	⅝
20¾	12½	109,000	15	13½	12½	Cities Service	(sh)	24,290,359	N.P.	30cA‡	5- 1-31	90⅞	54	68⅛	20	44¼	13
84¾	76⅜	3,000	80	78½	76⅜	Cities Service pfd.	(sh)	1,500,000	N.P.	50cM	5- 1-31	103¼	94½	98¾	84	93⅞	78¼
½	⅛	800	3/16	⅛	..	Colombia Syndicate		$2,000,000	$1	....	.....	3¼	.76	2	½	¾	⅛
2¾	1½	200	1⅞	1⅝	..	Consolidated Royal		$5,527,875	$10	7½cQ	4-25-31	8⅞	6¼	11⅛	2½	5⅞	2
⅝	⅜	900	⅜	⅜	..	Crown Central		.....	....	....	.....	..	..	..	..	..	..
5	2⅛	800	3	2⅛	..	Darby Petroleum		1,019,392	N.P.	....	10-15-30	33½	3¼	26	6½	21¾	4¼
6	2⅝	300	3¼	3	..	Derby Oil & Refining	(sh)	500,000	N.P.	....	.....	2¼	1	11	2	11	2
40⅛	30	No sales.	..	..	..	Derby Oil & Refining pfd.		48,500	N.P.	....	.....	21⅛	7½	44	20¾	60	30
75½	45	3,000	51¾	50	45¼	Gulf Oil Corp.	(sh)	4,504,921	$25	37½cQ	4- 1-31	165	101⅛	209	115	166⅞	58½
⅝	⅜	900	7/16	⅜	⅜	Intercontinental Petroleum		$5,682,000	$5	....	.....	3⅜	1	2⅞	⅜	1¾	⅜
1⅞	½	1,300	¾	½	..	Kirby Petroleum	(sh)	750,000	N.P.	....	.....	3	1¼	3⅝	1¼	3	⅞
1½	½	300	½	½	..	Leonard Oil & Development		$50,000,000	$25	....	.....	9⅜	5⅛	6⅛	1	4¾	½
6¾	4½	No sales.	..	..	..	Lion Oil & Refining	(sh)	250,000	N.P.	....	10-27-30	43⅞	20	38⅞	18	29	4⅞
25	14⅛	5,600	18⅛	16⅛	16	Lone Star Gas	(sh)	5,000,000	N.P.	22cQ	3-31-31	69⅛	48½	67⅞	28	55⅞	19⅝
½	⅛	1,400	⅜	¼	¼	Magdalena Syndicate	(sh)	850,000	$1	....	.....	1⅞	½	1¼	¼	½	⅛
5	3	100	5	5	4⅛	Margay Oil Corp.		160,000	N.P.	....	7-10-30	48½	32	38½	14	16	3
4⅞	1½	600	3½	3½	..	Mexico-Ohio Oil Co.		500,000	N.P.	....	.....	8	2¾	6⅜	2¼	7½	1¾
½	¼	200	¼	¼	..	Mountain & Gulf		$4,000,000	$1	1cQ	4-15-31	1¾	.76	1½	¼	¾	⅜
5⅞	3¾	100	3⅞	3⅞	3⅞	Mountain Producers		$1,682,182	$10	25cQ	4- 1-31	28⅞	19½	22⅞	7	12⅛	3¾
1½	1	600	1¼	1	..	New Bradford Oil		$1,095,291	$5	7cQ	4-15-31	5⅝	4¼	5	2½	3½	1⅛
3	1½	300	2	2	1½	New Mexico and Arizona		$1,000,000	$1	....	.....	11⅞	7⅛	9⅜	2¼	7¼	1½
3¼	1⅜	No sales.	..	..	..	North Central Texas	(sh)	400,000	N.P.	....	9- 2-30	14¼	8½	18½	6⅛	11¼	2⅛
½	¼	7,900	⅜	5/16	⅜	Pandem	(sh)	489,875	N.P.	....	.....	6	2⅛	3½	½	2½	¼
2	⅝	2,800	1	⅝	..	Pantapec Oil	(sh)	1,506,000	N.P.	....	.....	15⅝	8½	10½	1⅞	4⅝	⅞
2½	1¾	600	2½	2½	..	Red Bank Oil	(sh)	250,000	N.P.	....	.....	18	4⅞	16	9⅝	10⅛	1½
1½	⅞	800	1	⅞	..	Reiter-Foster	(sh)	388,584	N.P.	....	12- 2-29	12⅞	4⅛	8½	1⅛	5⅝	1
3	1¾	100	1¾	1¾	..	Ryan Consolidated	(sh)	500,000	N.P.	....	.....	12	4⅛	11	3	8⅝	2
1⅜	⅞	No sales.	..	..	⅞	Salt Creek Consolidated	(sh)	1,286,300	$10	7cQ	4- 1-31	7¼	5½	5⅞	1⅞	2½	½
7¾	4⅝	1,100	5¼	4⅝	5	Salt Creek Producers	(sh)	1,496,859	$10	35cQ	5- 1-31	35	23⅛	25⅞	9	15¼	5¼
5¼	1½	8,100	2⅝	1¾	1⅞	Sunray Oil Corp.	(sh)	1,163,185	$5	5%Q§	4-15-31	..	..	12	5⅝	10	2
1⅞	¾	No sales.	..	..	..	Venezuelan Petroleum	(sh)	755,090	$5	....	2-15-30	9⅛	4¾	6½	1¾	4½	⅜
3½	1½	No sales.	..	..	..	Woodley Petroleum		$500,000	$1	....	3-31-29	8¼	4⅞	9½	2	5	½
⅞	¼	100	¼	¼	½	Y Oil & Gas		100,000	N.P.	....	.....	8⅜	2⅛	2⅞	½	2½	⅜

*Ex-dividend. †Unit of trading less than 100 shares. ‡Payable monthly and monthly stock dividend of one-half per cent. §Paid in lieu of regular cash dividend of 2 per cent.

TRANSACTIONS IN OIL SHARES ON NEW YORK STOCK EXCHANGE

Quotations Compiled by Francis, Bro. & Co., Members of the New York Stock Exchange and Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

(Complete record week ending May 16)

1931 High	1931 Low	Week 'ended May 16 Sales	Week 'ended May 16 High	Week 'ended May 16 Low	Close May 20	Stocks—		Outstanding capital	Par value	Div. rate	Last paid	1928 High	1928 Low	1929 High	1929 Low	1930 High	1930 Low
23	16½	5,300	17½	17	16⅞	Amerada Corp.	(sh)	922,075	N.P.	50cQ	4-30-31	43⅞	27⅛	42⅝	17½	31½	16½
12⅜	5	No sales.	..	..	..	American Republics Corp.	(sh)	209,180	N.P.	$3.50SA	12-10-30	85	51⅛	64¾	12½	37	5⅛
31	26½	10	29⅜	29⅜	..	Associated Oil		$57,260,300	$25	50cQ	3-31-31	53⅜	37½	47¼	34½	51	30
23⅝	12½	6,200	15⅜	14½	13⅞	Atlantic Refining		$66,763,775	$25	25cQ	3-16-31	66⅜	50	77⅞	30	51⅜	16⅝
14½	6¼	10,300	8¼	7½	7	Barnsdall Corp. A		$56,546,600	$25	25cQ	5-11-31	54	20	49⅛	20	34	8⅝
12	6	8,100	7⅜	6¾	6¼	Continental Oil of Delaware	(sh)	4,741,554	N.P.	....	.....	..	..	47⅞	18	30½	7¾
47	18⅛	18,700	23⅝	21	18½	General Asphalt	(sh)	413,333	N.P.	75cQ	3-16-31	94⅞	68	94¾	42¼	71½	22⅜
68½	33½	4,400	42	36¼	34⅜	Houston Oil		$24,968,600	$100	....	.....	167	79	109	26	116⅞	29¼
4⅝	2	2,500	2½	2	2⅛	Indian Refining		$12,564,070	$10	....	.....	39⅝	9	53	13⅛	17	2
4½	2½	1,400	3	2⅞	2⅝	Louisiana Oil Refining	(sh)	1,190,063	N.P.	....	.....	19¾	9⅜	18	7	12	3½
3¾	1½	400	1⅝	1½	..	Maracaibo Oil	(sh)	330,000	N.P.	....	.....	25½	12½	18½	5⅛	10⅜	1⅜
20¾	10⅝	19,800	16½	14¾	14⅝	Mexican Seaboard	(sh)	1,244,383	N.P.	....	10- 1-24	72	4⅝	59⅜	8¼	37	9¾
16¾	8	2,500	9¼	8½	8	Mid-Continent Petroleum	(sh)	1,857,912	N.P.	....	.....	44½	25⅛	39⅞	22⅛	32	11
19½	8¼	16,800	8⅞	8⅜	8½	Ohio Oil	(sh)	6,648,052	N.P.	....	.....	84	58½	79⅞	64¼	32	16
35½	30	100	30½	30½	..	Pan American P. & T.		$50,084,700	$50	....	12-20-27	50⅞	38¼	69	40½	46½	42
36½	29	300	30	29½	..	Pan American P. & T. "B"		$121,110,650	$50	....	12-20-27	59⅞	37¾	69¼	40½	67¼	30
4¼	1¾	300	2½	2	..	Panhandle P. & R.	(sh)	199,370	N.P.	....	.....	21¾	11½	15¼	3	12¾	1¾
20	10	30	15	15	..	Panhandle P. & R. pfd.		$2,564,400	$100	....	.....	108	70	76	47½	20	47½
16⅝	6	15,700	7⅝	7	6⅛	Phillips Petroleum	(sh)	2,593,075	N.P.	....	1- 2-31	53⅞	35¼	47	24¼	44⅜	11½
1½	⅝	1,300	¾	⅝	..	Pierce Oil Corp.		$29,622,831	$25	....	.....	5¼	½	3⅜	1	2½	½
3⅜	1⅜	4,900	1⅞	1½	1½	Pierce Petroleum	(sh)	2,500,000	N.P.	10c	2-16-31	7	3½	5⅞	½	7⅛	1⅜
20⅜	9	6,700	11	9¼	9⅜	Prairie Oil & Gas		$60,848,000	$25	....	.....	68	46	65⅜	40½	54	11¼
26½	17⅞	3,100	21⅜	19½	19¼	Prairie Pipe Line		$101,250,000	$25	75cQ	3-31-31	280	172	65	45	60	16⅝
6	2⅛	300	3¼	3	2⅞	Producers & Refiners		$37,438,950	$50	....	9-15-23	29⅞	16	25⅞	4	11⅞	1
16	7½	No sales.	..	..	..	Producers & Refiners pfd.		$2,845,350	$50	....	5- 4-25	49⅝	41	46¾	25½	40	11½
11⅞	5½	7,000	6½	6	6⅛	Pure Oil		$75,959,250	$25	....	9- 1-30	31⅝	19	30¾	20	27¼	7⅝
6¾	1¼	2,500	1½	1¼	1¼	Richfield Oil		$52,410,875	N.P.	....	.....	56	23	49⅝	20	9¾	4⅛
10¼	4	3,300	4¾	4⅜	4⅛	Rio Grande Oil	(sh)	1,236,270	N.P.	....	7-25-30	37½	32	42½	15	25¾	5
42⅝	27½	23,200	32	28⅛	29⅛	Royal Dutch, N. Y.	(sh)	611,303	....	$1.3404	1-30-31	64	44⅝	64	43⅛	56½	36⅞
34	24⅜	No sales.	..	..	..	Shell Transport & Trading Co.		£23,985,000	£1	$0.966	1-23-31	47⅞	41⅜	51½	40⅝	48⅜	26
10¼	4½	18,800	5⅛	4½	4⅞	Shell Union Oil	(sh)	13,066,497	N.P.	....	6-30-30	39¼	23¼	31¾	19	25½	5¼
11	5¾	400	6	5⅞	5¾	Simms Petroleum		$8,353,620	$10	....	9-15-30	27¼	18⅛	40⅛	15	37	5⅝
15⅞	8	20,000	9¼	8½	8¼	Sinclair Consolidated	(sh)	5,500,000	N.P.	25cQ	4-15-31	46⅜	17⅝	45	21	32	9¾
103	82	900	92	84	82¼	Sinclair Consolidated pfd.		$16,025,250	$100	$2Q	5-16-31	110	102½	111	103	112¼	86
12⅞	3¼	3,200	5⅜	4½	4¼	Skelly Oil		$27,441,250	$25	....	12-15-30	42⅝	25	40½	28	42	10⅛
51¾	33	18,400	37⅞	35	35¼	Standard of California	(sh)	12,594,098	N.P.	62½cQ	3-16-31	80	63	81⅞	51½	75	42¼
19	9	200	11½	11⅜	9¾	Standard of Kansas		$8,000,000	$25	....	3-16-31	37¾	15	33¾	18	49	14⅜
52½	33½	54,600	37¼	34⅝	34⅝	Standard Oil of New Jersey		$634,999,200	$25	25cQ‡	3-16-31	59⅜	37¾	83	49	84⅞	32½
26	17⅝	22,500	19	18	17⅝	Standard Oil of New York		$445,223,675	$25	40cQ	3-16-31	33¼	28¾	48⅛	31¾	40⅜	19⅜
45¼	33	600	35	34⅜	33	Sun Oil	(sh)	1,416,869	N.P.	25cQ	3-16-31	77	31½	68⅝	55	70	39
1¾	¾	800	1	⅞	¾	Superior Oil Corp.	(sh)	776,979	N.P.	....	12-20-30	..	..	24	5¼	9⅜	¾
36¼	18⅞	80,100	20⅞	18⅞	20¾	The Texas Corporation		$246,204,900	$25	50cQ	4- 1-31	74¾	50	71⅞	50	60½	28¼
6½	3½	1,100	4⅛	4	..	Texas Pacific Coal & Oil Co.		$9,304,890	$10	....	12-31-29	26⅝	12⅛	23⅞	9½	14½	4
18	10½	No sales.	..	..	..	Tide Water Oil	(sh)	2,191,759	N.P.	20cQ	3-31-31	41½	19⅝	40	14	31	13
83	66¾	No sales.	..	..	..	Tide Water Oil pfd.	(sh)	19,947,000	N.P.	$1.25Q	5-16-31	100½	86	97½	85⅛	94⅞	71
9	4¼	11,000	5	4¼	4½	Tide Water Associated	(sh)	5,560,424	N.P.	30cSA	2-16-31	25	14¾	23½	10	17¾	5⅞
68	44¾	3,000	49	44¾	..	Tide Water Associated pfd.		$73,284,500	....	$1.50Q	4- 1-31	..	..	90⅞	74⅛	89¾	55
26⅝	14	3,300	17⅛	15⅞	16¼	Union Oil of California		$104,342,375	$25	50cQ	5- 9-31	58	42⅝	57	42⅛	50	10⅛
25¼	20	2,300	21	20	20	Union Tank Car	(sh)	1,254,048	$100	40cQ	3- 2-31	128¼	110	163¾	121⅞	38½	23
7¾	3⅜	900	3½	3½	3⅜	Warner-Quinlan	(sh)	632,948	N.P.	....	7- 1-30	44⅞	26	42⅞	15	27	4¼
9⅜	5¾	1,400	7	5¾	..	Wilcox Oil & Gas	(sh)	428,907	N.P.	....	5-10-28	..	..	29¾	12⅞	21	6½

*Ex-dividend. †Unit of trading less than 100 shares. ‡Plus extra dividend of 25 cents.

In comparing highs and lows for the several years in the three tables, it will be necessary to take into consideration cases where there have been stock split-ups.

EAST COAST REFINED OIL MARKET IS SOFT

(Continued from Page 103)

later on if conditions in the market justify such a step.

French refining interests are inquiring for American crude in considerable quantities, and indications are that a large tonnage will move from the new flush production areas of East Texas into export channels later on in the year and throughout 1932. A contract was closed this week for 50,000 tons of East Texas crude (approximately 350,000 bbls.) for June-July-August shipment to France at 67 cents per barrel, f.o.b. tanker Gulf port. The crude involved is guaranteed 36° gravity minimum, and the seller was an English company which has been active in the Gulf export gasoline market during the past year or so.

Venezuelan crude, minimum 17 gravity, is offering for prompt and later shipment at 67 cents per barrel, f.o.b. tanker at tidewater points adjacent to Venezuela, with no cargo transactions reported during the week.

A Gulf Coast refiner sold a cargo of 7,000 to 7,500 tons of 375 endpoint gasoline for export during the week at 4¼ cents per gallon. No other gasoline export sales were reported from the Gulf during the week.

Sellers who were working on a French inquiry for two cargoes of 400 endpoint gasoline during the previous week, reported this week that the business had gone to Rumania. It had been expected that California refiners would be able to quote on a competitive basis, particularly in view of the fact that several tankers are available at California ports for the movement of clean oil to Europe at distressed rates, but Rumanian refiners apparently underbid the Pacific Coast sellers on the business, as has happened frequently since the beginning of the year.

Petroleum Exports

Heavier shipments of principal refined products into export channels were reported during the week ended May 16, lub oils and paraffin wax in particular showing a sharp increase in volume.

The following table shows principal exports of refined petroleum products from New York for the past three weeks (all figures in gallons unless otherwise noted):

	Week ended		
	May 16	May 9	May 2
Gasoline	195,000	60,000	10,000
Naphtha	375,000	65,000	275,000
Kerosene	33,000	10,000	20,000
Fuel oil	25,000	18,000	5,000
Lubricating oil	3,175,000	1,175,000	2,360,000
Petroleum, ref.	395,000	875,000	495,000
	Pounds		
Petrolatum	7,000	.....	260,000
Paraffin wax	1,680,000	1,565,000	1,500,000
Refined	45,000	75,000	550,000
Scale	1,050,000	725,000	110,000
Lubricating grease	1,050,000	610,000	425,000

Export operators with established outlets in South American markets are running into keener competition from Russian gasoline and kerosene in a number of principal distributing points on the East Coast, and it is reported that this competition will be intensified as Russia continues to open up new outlets for its products in South America.

European demand for American refined products continues seriously affected by the virtual dumping of Russian and Rumanian gasoline, kerosene and other products at prices too low for American competition, even with the depressed markets for these products now ruling in the United States.

Locally, export operators report a fair amount of inquiry from abroad, but report that foreign buyers are not inclined to close business at current prices, and are holding off the placing of orders until the last minute in order to take advantage of any price concessions which may develop. The recent history of the refined products market, from a price standpoint, has not been such as to stimulate confidence among buyers.

Imports

Imports of crude and refined petroleum at the principal United States ports for the week ended May 16 totaled 1,279,000 bbls., a daily average of 182,714 bbls., compared with 1,377,000 bbls., a daily average of 196,714 bbls. for the previous week and a daily average of 203,714 bbls. for the four weeks ended May 16. Details follow:

	Bbls. of 42 gals.
At Atlantic Coast ports—	
Baltimore	152,000
Boston	101,000
New York	795,000
Philadelphia	98,000
Others	133,000
Total	1,279,000
Daily average	182,714
At Gulf Coast ports—	
All ports	None
At Atlantic and Gulf Coast ports—	
Total	1,279,000
Daily average	182,714
Daily average four weeks	203,714

Distribution of total imports is as follows:

Crude	1,030,000
Gasoline	65,000
Fuel oil	184,000

California Oil Receipts

Receipts of California crude and refined petroleum at Atlantic and Gulf Coast ports for the week ended May 16 totaled 544,000 bbls., a daily average of 77,714 bbls., compared with 215,000 bbls., a daily average of 30,714 bbls. for the previous week, and a daily average of 63,071 bbls. for the four weeks ended May 16. Details follow:

	Bbls. of 42 gals.
At Atlantic Coast ports—	
New York	210,000
Philadelphia	117,000
Others	144,000
Total	471,000
Daily average	67,286
At Gulf Coast ports—	
Total	73,000
Daily average	10,428
At Atlantic and Gulf Coast ports—	
Total	544,000
Daily average	77,714
Daily average four weeks	63,071

Distribution of total California oil receipts is as follows:

At Atlantic Coast ports—	
Gasoline	471,000
At Gulf Coast ports—	
Gasoline	73,000

Shipments of California refined products for Atlantic and Gulf Coast ports during the week (with identity of owner of tanker moving the oil where such owner is an oil company) follow:

To New York—80,000 bbls. of gasoline on the Betterton (Associated Oil Co. of California), and 112,400 bbls. of gasoline on the Brilliant (Atlantic Refining Co.).

To Philadelphia—113,700 bbls. of gasoline on the Western Sun (Sun Oil Co.).

To Bayonne—52,800 bbls. of fuel oil on the Huguenot (Richfield), and 90,000 bbls. of gasoline on the Livingston Roe (Standard Oil Co. of New Jersey).

Charter Market

Demand for both intercoastal and transatlantic tonnage continued rather slack during the week, with current fixtures at distress rates in many instances.

More activity in oil export trading is reported at the Gulf, however, and this is expected to stimulate the demand, particularly for dirty tonnage. With France coming into the market as a buyer of East Texas crude, it is expected that considerable activity in dirty tanker chartering will be witnessed at the Gulf later in the year.

Fixtures reported during the week were as follows:

Steamer Zoroaster (Swed.) 1,830 net, lubricating oil, North Atlantic to the continent 11/-, May/June.

Steamer Longwood (Br.) 6,000 tons, clean, Trinidad to the Thames, 6/9 combined with 4,000 tons, clean, Gulf to the Thames 9/-, and 2,000 tons benzol New Orleans to the U.K./continent 10/6, June.

Motorship Oilreliance (Br.) 7,500 tons, clean, Black Sea to French Atlantic ports, 6s 9d, June loading.

Steamer Elizabeth Kellogg (Am.) 45,000 bbls., dirty, California to Japan, 40 cents one, 43 cents two ports, May/June loading.

PIPE LINERS ARE USING MACHINERY EXTENSIVELY

(Continued from Page 17)

burying in the ground the next gang to follow the paint crew will lower the pipe into the ditch in sections. For this purpose it is now common practice to use a small tractor that is equipped with a crane or boom and can move about freely along the right of way.

Several of these tractors may be used along a section of pipe in such a way as to permit them to handle the solid string of pipe without undue tension or compression strains being set up and joints being ruptured or gaskets being cut where patented couplings are used.

Another method of lowering pipe is to use a number of wooden or pipe trestles or horses that are set across the ditch at close intervals and each equipped with a snatch block and tackle. One man is assigned to each horse and the whole section of pipe is first lifted off the skids upon which it rests and then gradually lowered into the ditch.

With such an arrangement the angle between the pipe and the bottom of the ditch is very small, and the pipe is lowered gradually over stretches 500 to 600 feet long so no one joint is subjected to any great strain. With such an arrangement the horses are moved forward constantly by a small truck equipped with a light boom that can move quickly up and down the right of way and place the horses where next needed.

Some contractors prefer horses or trestles made out of timbers while others have their equipment made out of old pipe welded together. The pipe horse is slightly heavier than the wooden one but probably lasts longer.

Backfilling and Top Dressing

After the pipe is in place in the ditch it is inspected and then the ditch is filled with earth. This operation is now done with either a tractor fitted with a plow in front and known as a "bull-dozer" or by a crane that will carry a bucket over the pile of earth and drag it into the ditch.

Both types have their advantages and each work at about equal speeds, but in using either type care is now exercised so that the rock and hard material is not bumped into the ditch first and the pipe coating or covering injured. Earth should form the first covering around the pipe and it should be packed in as closely as possible so that future settling and movement will not set up undue soil stresses along the pipe line.

Investigations recently carried on by pipe line engineers and others have developed the fact that soil stress is one of the determining factors in estimating the life of pipe coatings and where a good coating is broken by soil movement its efficiency may be so lowered as to make its application practically useless.

More and more attention is being given to this apparently simple operation of filling a ditch after the pipe is in place and from experience gained in the past it has been proven that this care is justified and very necessary.

When the pipe line ditch is filled it is next necessary to dress the whole right of way so that it will be in as near its original condition as possible and this work is performed by a gang of men working with or following immediately after the ditch filling gang.

Fences are restored, surface improvements placed in their original position and the ground smoothed in farm land so that the owners can again use the surface for the same purposes for which it was used before the pipe line was run through it.

River Crossings

All operations in building pipe lines are not confined to straight ditching and pipe laying for streams must be crossed and at times long stretches of lines must be laid in marshes or swamps where shallow water occurs.

For river crossings it is usual practice now with all types of lines, whether for the transportation of gasoline, crude oil or gas, to manifold the line on each bank of the stream and lay several lines across the stream channel.

Manifolds take various forms largely depending upon the design preferred by the pipe line engineer in charge of the project but in principal they are all the same. They consist of a welded pipe section that will permit of connecting into it the required number of lines that will actually cross the stream.

On the North Canadian River crossing of the 24-inch gas line from the Panhandle of Texas to Chicago there are six 12-inch lines crossing the river and making an upstream bend of about 280 feet. This crossing was made when part of the stream bed was dry and part filled with water and the lines as made up were pulled across the river channel by tractor.

A river clamp of cast iron was used every 20 feet and each clamp weighed about 1,500 pounds and there was a total of 950 clamps used on this job. The clamps serve to weight the line down and hold it in place and to some extent they prevent movement between joints in the pipe line by stiffening it and in this way reduce chances of breakage.

On the river bank at a low point in the crossing there were installed six drips to which all condensed vapors drain and are removed. This is necessary because the gas passing through the cool waters of the stream will condense to some extent and if this fluid was not removed it would in time form a liquid seal in the line and cause trouble.

Every part of the river crossing was treated with hot enamel coating and special care exercised in its application. When the line was in place part of the ditch was back filled, but the stream waters did a good deal of this work and will keep the lines buried under normal conditions.

A crew of about 90 men was used on this river crossing job and part of the ditch on the river banks had to be hand dug because the machine ditchers could not negotiate the steep grades. The pipe had to be handled largely by hand also and the time required for this particular stretch of pipe line laying was slightly longer per unit of length than on the straight line elsewhere.

Summary

Pipe lining is being influenced by this machine age like all other industries, but the total number of men required for this kind of work is probably greater now than formerly, and it is certain that their earning power per man is much higher.

Skilled welders, tractor operators, truck drivers and other mechanics used on the modern pipe line job are specialists in their lines and as speed is the order of the day the amount of pipe laid in the ditch is much greater per worker than formerly. On a stretch in West Texas through a farming country as high as 2 miles of 24-inch pipe was laid daily with the use of about 175 men regularly.

These crews must be cared for by camps and moving kitchens in some districts much as the army is cared for on the march and even this commissary department is fully organized and the food and accommodations offered above average for labor camps.

The contractors have large sums of money invested in equipment which is employed intensively for comparatively short periods of time, and then put in the yard until another job is secured. This investment is necessary and justified because speed must be made when contracts are secured and with the big lines now being laid in all parts of this country, especially for carrying gas, there is a fair amount of work most of the time.

Good pipe line workers are almost always in demand but they move around a great deal for they must travel to and with the job but many of them are married and their wives accompany them to their working places. On big jobs it is possible to establish headquarters in some near-by town for a reasonable length of time and as most workers own their own cars they can travel 50 or 60 miles to work each day without dis-

comfort and thereby live in one place while 100 or 125 miles of line is being laid.

The old timer is adjusting himself to the new conditions and the new men coming into this work must have the qualities that have made the oldtime pipe liners successful so the whole organization is now on a new plane and doing its work very effectively and as many long new lines are still to be laid this branch of the industry should continue to expand.

NORTH AND WEST TEXAS

(Continued from Page 46)

depth 730 feet. Eastland Oil Co. and others' No. 1 Stewardson, gas sand 1,564-77 feet, initial production 1,902,000 feet of gas with 540 pounds of rock pressure, total depth 1,601 feet. Engle and others' No. 1 Stewardson, dry and abandoned, total depth 1,950 feet.

Brown County

Atlantic-Pacific Oil Corp.'s No. 1 McClanahan, dry and abandoned, total depth 1,204 feet. Humble Oil & Refining Co.'s No. 3 Kilgore, oil sand 1,203-22 feet, initial production 139 bbls., total depth 1,223 feet. E. L. Smith Oil Co.'s No. 1 Carmichael, dry and abandoned, total depth 1,620 feet.

Palo Pinto County

Brazos River Gas Co.'s No. 1 Owens, temporarily abandoned, total depth 1,210 feet. Mook-Texas Oil Co. and others' No. 1-A Rexroat, sand 1,792-1,805 feet, increase in gas 2,328-50 feet, total gas estimated 500,000 feet, dry and abandoned, total depth 3,605 feet. Ashe Syndicate's No. 1 Seaman, dry and abandoned, total depth 4,149 feet. Bennings and others' No. 1 Strawn, dry and abandoned, total depth 881 feet. Hauber and others' No. 1 Weedon, temporarily abandoned, total depth 4,065 feet. Texas Pacific Coal & Oil Co.'s No. 1 Stuart, top lime 2,978-95 feet, initial production 9,730,000 feet of gas, total depth 2,998 feet.

Stephens County

Urban and others' No. 1 Riadle, sand 2,000-40 feet, initial production 1,751,000 feet of gas, total depth 2,040 feet.

COMPLETIONS IN NORTH CENTRAL TEXAS

Archer County

Stump and others' No. 2 Wilson, total depth 1,532 feet, plugged back to 1,530 feet, oil sand 1,523-32 feet, initial production 25 bbls. oil and 12 bbls. of water. John H. Wilson's No. 1 White, dry and abandoned, total depth 1,600 feet. W. C. Young's No. 1 Plowman, temporarily abandoned. R. J. Brown's No. 1 Webb, dry and abandoned, total depth 851 feet. C. W. Clark's No. 1 Cross, temporarily abandoned, total depth 1,421 feet. C. W. Clark's No. 2 Laine, oil sand 1,273½-83 feet, bailed slight show oil and salt water, total depth 1,283 feet. Cullum and Alexander's No. 1 Falls, lime 1,177-91 feet, shot with 60 quarts from 1,177-91 feet, initial production 15 bbls., total depth 1,191 feet. Cooper, Hays and others' No. 1 Beardan, oil sand 1,082-87 feet, initial production 25 bbls. oil with 3 bbls. of water, total depth 1,087 feet. Hunter Oil Corp.'s No. 1 Hausler, sand 1,138-40 feet, slight show, dry and abandoned, total depth 1,151 feet. Perkins and Cullum's No. 1 Falls, saturated lime 1,070-93 feet, shot with 100 quarts from 1,170-93 feet, initial production 65 bbls., total depth 1,093 feet. Rubsam, Golding & Cochran's No. 1 Hausler, dry and abandoned, total depth 1,178 feet.

Baylor County

Douglas Oil Co.'s No. 1 Robertson, dry and abandoned, total depth 2,440 feet.

Jack County

The Ascot Co.'s No. 1 Maxey, temporarily abandoned, total depth 1,175 feet. Dunninger, Sampley and others' No. 1 Richards and Lanier, dry and abandoned, total depth 625 feet.

Haskell County

C. Fischer's No. 1 Fischer, dry and abandoned, total depth 750 feet.

Parker County

Sanger Oil & Gas Co.'s No. 1 Moran, abandoned.

Throckmorton County

Cox and Henderson Oil Co.'s No. 1 McKeechan, dry and abandoned, total depth 891 feet. Swenson Oil & Gas Co.'s No. 1 Swenson, dry and abandoned, total depth 5,981 feet.

Young County

N. B. Dollin's No. 1 Carpenter, dry and abandoned, total depth 914 feet. McClung and Dawson's No. 2 Hunter, dry and abandoned, total depth 634 feet. Pennell and Harris' No. 1 Cantwell, dry and abandoned, total depth 555 feet. Putnam Oil Co. and Panhandle's No. 2 Jeffery, dry and abandoned, total depth 931 feet. Shamblin and Earnest's No. 1 Taack, dry and abandoned, total depth 950 feet. Sam Simmon's No. 1 Sanders, dry and abandoned, total depth 600 feet. The Texas Company's No. 1 Tatum, oil sand 657-60 feet, initial production 57 bbls., total depth 660 feet. The Texas Company and McKanna's No. 1 Jeffery, dry and abandoned, total depth 838 feet. Williams and others' No. 6 Taack, oil sand 654-71 feet, initial production 10 bbls. on pump, total depth 671 feet. Wise, Jackson and Devonian Oil Co.'s No. 1 Brown, dry and abandoned, total depth 535 feet. Young and others' No. 1 Thomas, dry and abandoned, total depth 1,012 feet. Knox and others' No. 1 Brashears, oil sand 2,695-13 feet, initial production 80 bbls. oil with estimated 3 bbls. of water, total depth 2,730 feet. Nash and Windfohr's No. 6 Hinson, lime pay 2,015-16 feet, initial production 533 bbls. oil and 15 bbls. of water, total depth 2,016 feet.

NORTH TEXAS PRODUCTION
Week Ending May 23

Panhandle district—	Bbls.
Carson County	4,396
Gray County	45,580
Hutchinson County	8,572
Moore County	204
Potter County	0
Wheeler County	250
Total production this week	59,002
Total production last week	61,250
Decrease	2,248
Wichita Falls district—	
Archer County	11,856
Baylor County	465
Clay County	607
Cooke County	1,798
Foard County	51
Jack County	1,664
Haskell County	23
Montague County	3,276
Throckmorton County	318
Wilbarger County	9,768
Wichita County	18,881
Young County	12,442
Total production this week	61,149
Total production last week	60,244
Increase	905
Ranger district—	
Brown County	3,504
Callahan County	2,570
Coleman County	1,440
Comanche County	719
Palo Pinto County	324
Eastland County	3,034
Shackelford County	3,767
Stephens County	4,430
Total production this week	19,788
Total production last week	19,902
Decrease	114

RUNS THROUGH TRUNK LINES

Company, size and location—	Bbls.
Atlantic, 10-inch, Houston	4,004
Gulf, 10-inch, Ranger	24,186
Humble, 2-8-inch, San Angelo	39,408
Humble, 10-12-inch, Comyn	45,215
Illinois, 2-8-inch, Del Rio	26,294
Magnolia, 8-inch, De Leon	20,295
Pasotex, 8-inch, El Paso	13,167
Shell, 10-inch, Healdton	32,541
Shell, 10-inch, Houston	27,743
Texas, 12-inch, Houston	22,571
Total	255,424

RUNS TO WEST TEXAS REFINERIES

Big Spring Ref. Co., Big Spring	959
Burford Ref. Co., Pecos	4,221
Cosden Ref. Co., Big Spring	6,824
Col-Tex Ref. Co., Colorado	7,926
Humble Oil & Ref. Co., McCamey	16,167
Great Western Ref. Co., Big Spring	2,462
Tonkawa Ref. Co., Pyote	1,252
Wickett Ref. Co., Wickett	524
Total	40,335

TANK CAR SHIPMENTS

Shell Pet. Corp. from McCamey	450
Fox and Thorsen from Mertzon	47
Big Lake from Texon	3,000
Southern C. O. P. Co. from Wickett	6,307
American from Pyote	....
Total	9,804
Total daily average production	247,287
Total daily average distribution	305,453
Daily average from storage	58,166

COMPLETIONS IN PANHANDLE DISTRICT

Carson County

North American Oil & Gas Co.'s No. 1-80 Burnett, top pay 2,210-2,410 feet, initial production 40,000,000 feet of gas, total depth 2,427 feet. The Texas Company's No. 1 Schaffer, initial production 16,500,000 feet of gas with 365 pounds rock pressure, total depth 2,920 feet.

Gray County

Magnolia Petroleum Co.'s No. 1 Barnett, top pay 3,228 feet, total depth 3,360 feet, plugged back to 3,258 feet, shot with 70 quarts from 3,223-58 feet, initial production 20 bbls., pumping.

Hutchinson County

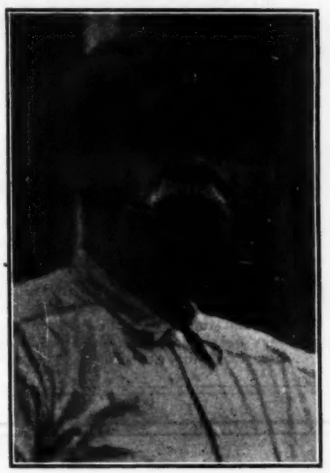
The Texas Company's No. 1 Moore, total depth 3,150 feet, shot with 50 quarts from 3,110-50 feet, top pay 3,128-45 feet, initial production 75 bbls.

Potter County

Canadian River Gas Co.'s No. 1-B Crawford, top pay 2,330-2,460 feet, initial production 17,000,000 feet of gas, total depth 2,540 feet.

IN THE OIL BUSINESS IN DAYS OF COL. DRAKE

J. H. Waggoner, 90 years old, charter member of the petroleum industry's Old-Timers Club, died on Wednesday, May 20, at his home just outside of Tulsa. Mr. Waggoner, who started in the oil



J. H. Waggoner

business at its very commencement retired from it several years ago and was conducting a grocery at the time of his death.

Mr. Waggoner lived near Titusville, Pa., when the Drake well was drilled. He took part in the early day development of the field which resulted from the Drake discovery. With the outbreak of the Civil War he enlisted in the Federal Army and at the close of the war signed with an English syndicate and was sent to Egypt to drill artesian wells for water. He remained in Egypt seven years and upon his return to the United States became a driller of oil and gas wells. Mr. Waggoner was employed in various fields in the old Eastern and Central West Fields, and 18 years ago came to Oklahoma where he was in charge of production of the Chosen Oil Co., and later with other companies in their production department.

The funeral services were held in Tulsa on Thursday and the body taken to Lima, Ohio, for burial.

Surviving are three children, Mrs. Stella Dickinson of McDonald, Pa., and U. G. and H. F. Waggoner, both of Tulsa.

HOW TO LOSE GALLONAGE IN MARKETING PRODUCTS

(Continued from Page 111)

competitors who will meet or better your underhand offers.

10. Instruct your large tank truck drivers to always use the middle of the highway, wear ear muffs and disregard all signals requesting passing space from motorists in the rear. This is an excellent rule to send your customers elsewhere, particularly if your trucks are plainly and conspicuously painted and marked.

11. Encourage commercial trucks to park in the driveways of stations located on through highways. Transients will invariably pass you up.

12. See that the attendants roughly slam open the hoods when checking oil gauges, run the radiator over when replenishing water and set oil cans on running boards.

13. Do not visit your stations often and when you do never commend the operator if the place looks particularly clean and attractive. Do not encourage the operators to use their spare time to polish brass, glass, etc. Urge them to finish any minor task before waiting on a customer who drives in.

14. Scatter as many pumps as you can at disreputable looking locations along the highways, where customers cannot obtain service. It will teach them to avoid all your stations.

Of course there are many other ways of discouraging customers but the above "14 points" will give a rough idea of the most effective plan in current use.

PRICE ADJUSTMENT EXPECTED IN CALIFORNIA

(Continued from Page 15)

the possibility of prosecution for monopoly. The proposal to organize a buyers agency is receiving careful consideration and from present indications will become a reality especially because it will fit in nicely when compulsory regulation of production becomes effective.

Oil Survey Committee

Another organization, the aim of which is to stabilize the oil industry on the Pacific Coast, came into being during the past week. This is the California Oil Survey Committee consisting of Allan C. Balch, formerly president of the San Joaquin Light & Power Corp., Harry L. Fair, president of Pierce-Fair & Co., L. D. Ricketts, formerly president of the Inspiration Copper Co. of Arizona, Roy N. Bishop, formerly president of Sperry Flour Co., and Mark L. Requa. This committee, acting on its own initiative, will attempt to diagnose the ills of the oil industry on the Pacific Coast and prescribe a remedy. The findings of the committee will undoubtedly receive weighted consideration but it does not seem likely it will be able to influence the picture one way or the other.

At the initial meeting in Los Angeles a few days ago, the committee issued a statement to the effect that, "the present unsatisfactory condition of the petroleum industry in California is detrimental to the interests of the nation, the State and the people of California, both consumer and producer. Due to a flood of oil produced without consideration for the consuming ability of the market, intense competition in the marketing of petroleum products has developed and become more and more destructive until we are now faced with the threat of serious financial disaster. Immediate remedies are of paramount importance. Overproduction in Texas and Oklahoma and abroad has similarly demoralized Mid-Continent, Gulf, Atlantic Seaboard and foreign markets. The combined effect of this flood of oil on Pacific Coast and other markets, both domestic and foreign, has resulted in a threatened industrial collapse that must be averted. A calamity of this character would obviously damage all industrial activity. Knowledge of this situation has prompted a group of business men to tender their friendly offices with a view of suggesting a program for solution of the difficulties now confronting the California industry."

The committee, which will expect to supplement statistical data with personal interviews with the executives of the various oil companies and others interested in the industry, has already begun collecting preliminary figures. At the initial meeting each member of the committee was asked to begin the preparation of such facts as each deemed necessary to give the entire committee an adequate understanding of the problem, together with suggestions for correction of existing conditions. It is thought that the investigation now being conducted by the California Oil Survey Committee should result in a series of recommendations that might go far in eliminating the present demoralization if the various interests are able to adopt them.

FRANK DISCUSSION IS PRESENTED IN MEETING

(Continued from Page 13)

while the refiners had altered their operations to make them better able to "deal" with sellers of natural gasoline, they still remain dependent upon natural gasoline to supply the quality in the finished gasoline they generally recognize.

Attitude of Refiners

The new system of grading natural gasoline is expected to encourage the use of it by refiners because they will be in a better position to predetermine the quality of their blend. Regardless of whether use of it will be increased, refiners have indicated they favor the new system.

A survey of Mid-Continent refiners was recently made by the Texas Pacific Coal & Oil Co., the results of which were summarized by Dr. E. R. Lederer, vice president. He said that out of 40 questionnaires sent the company received 26 replies, 15 of which showed the refiners to be definitely in favor of the new method, 2 not in favor of the change, 6 who had not fully acquainted themselves with the new specifications and 3 who were noncommittal. One of the answers was read in part which Doctor Lederer said summarized the opinions expressed in a number of the answers. This was to the effect that under the change the refiner, first, will be better able to choose the grade he finds will best fit his operating conditions and second, will enable him to predetermine the quality of his blend and by using one grade or another he will be able to shift his purchases more intelligently as market conditions change.

California Operations

One of the operating problems discussed was that of relative absorber efficiencies at the higher pressures such as those used in the California fields. C. R. Burgess of the Standard Oil Co. of California was called upon to outline the experience of gasoline manufacturers operating plants in the Kettleman Hills Field. He compared the absorber efficiency in those plants which operate at 30 pounds pressure and those which carry 400 pounds such as typical in areas of high natural pressure.

He said that whereas the ordinary 16-plate absorber, operating under a 30-pound pressure will show an efficiency of 75 per cent and exert the theoretical efficiency of an absorber of 12 plates, that same absorber, operating at 400 pounds pressure, would have a theoretical efficiency equivalent to one of 8 plates. The reason for this was not made clear but as a result of this experience, Mr. Burgess said most companies were adopting the use of 24 plates as a standard for high pressure absorption.

Dr. G. G. Brown offered an explanation by pointing out that absorber efficiency is determined by the contacting of the oil and gas in the space just above the liquid level rather than the contacting of the gas and liquid on the trays. He asked whether the same linear velocity was maintained by the gas going through the high pressure absorber as through the low pressure absorber. He suggested this as a clue to the possibility that there was less turbulence and agitation in the high pressure tower which in turn would decrease the froathing action. He was answered by Mr. Burgess to the effect that about the same linear velocity was maintained in both cases and that he could not explain the action as due to this factor.

A further investigation of this is being made by the California manufacturers.

One of the features of the latter part of the meeting was the short address by Judge J. C. Denton of the Mid-Continent Oil & Gas Association who asked for the support of the members of the natural gasoline association in a movement to discourage the practice now becoming common among states to divert gasoline tax money to uses other than for the building and repair of roads. He asked also they aid in locating and identifying marketers who make a practice of evading the tax. He pointed out that since adopting the 5-cent tax it has become a temptation for unscrupulous marketers to start up in business and because of the slow process of law, he is able to evade paying anything for three months and by that time he will have been able to undersell legitimate competitors at a handsome profit to himself. He showed where the natural gasoline manufacturers bear a part in correcting this condition equal to that of the refiners.

NATURAL GASOLINE FROM REFINERS' VIEW

(Continued from Page 22)

the production in line with demand by debutanizing its natural gasoline and moving it direct to distribution centers with saving in freight and two-fold losses, and at the same time improve its finished motor fuel. It certainly is to the advantage of both refiner and manufacturer to keep this natural gasoline out of the hands of price cutting blenders, who "bear" the price on our products.

Points of contact have been developed during the last few years between the two industries to meet common problems, and it would appear that both will feel the beneficial results of such contacts when better days, now seemingly eons ahead, come into real being.

SEES NEW TREND TOWARDS INTEGRATION

(Continued from Page 15)

facture of bricks, and actual building operations as well will be in the hands of integrated companies active in all of these phases of operations.

"In the foodstuffs industry, there has been a pronounced trend toward integration, led by the several national chain groups. Leading wholesalers have joined their buying operations; have purchased canning plants and factories engaged in the manufacture of grocery and allied specialties. There are many large units in the food industry at present engaged in the production, transportation, wholesaling and retailing of foodstuffs. The day of the independent as a dominant factor in each of these varied branches of activity in the food industry appears to be drawing to a close.

Textiles and Rubber

"The textile business is another basic industry which is rapidly veering toward integration. Whereas in former years this industry was a most complex affair, split up into yarn producing, knitting, spinning, converting, dyeing and marketing groups, there is a growing tendency on the part of larger units in the field to integrate all of these operations, eliminating costs and duplication of effort all along the line. A casual survey of conditions in the textile field gives ample evidence that the day of integration is at hand here.

"Rubber manufacturing, another basic industry, has also witnessed a pronounced trend toward integration. Leading companies now not only control in large measure their supply of raw rubber abroad, through ownership of rubber plantations and vessels for the transportation of this rubber, but have integrated their manufacturing operations through investments in chemical and other businesses supplying them with manufacturing materials and have integrated their selling operations to the point where the formerly large list of jobbers of rubber products is steadily dwindling as the larger manufacturers veer toward direct selling.

"The Ford Motor Co. and General Motors Corp. are outstanding examples of integration in the automotive field. Both of these huge corporations, and a number of smaller automobile companies as well, have carried their integration programs to the point where they exercise a very definite control over their cost at all points along the line.

"The coal industry is beginning to awaken to the need of integration. Companies which for years have been losing ground while conducting straight mining operations are now awake to the need for diversification of operations, and are acquiring by-products plants and making arrangements to enter all phases of the coal, coke and by-products industry.

"Copper mining companies, which have experienced in some measure the same trouble as the oil industry, are at last awake to the need for diversification of operations, and the successful copper companies of the future will be those which not only control adequate production of the crude metal but manufacture and distribute copper products as well.

"The foregoing examples give some little indication of what is going on in other branches of American industry. In what fundamental respect is the petroleum business different from these other basic industries?

"Many in the petroleum industry pride themselves on the progress which has already been made toward integration. A thorough analysis of the situation, however, shows how little real integration has developed, with the exception of that achieved by the major companies in the industry which have solidly consolidated their various operations as their integration has progressed. These large units, in my opinion, enjoy the designation of 'major companies' only because their executives have been farseeing enough to thoroughly integrate their operations as the growth of their companies has progressed.

"Notwithstanding its many advantages, unit operation has been difficult to achieve in domestic fields, yet the very opponents of this common-sense method of extracting crude from the ground have been ultimately forced into line through proration, which after all is nothing else than enforced unitization. Thus, while rationalization of producing operations is at last in sight, it has come only at tremendous cost to the entire industry.

"A more general realization of the economic aspects of unit operation five years ago would have created many true crude oil reserves; would have stimulated integration, and eliminated in large measure the difficulties with which many oil companies—both producing and refining— now find themselves confronted. Integration would have given the industry as a whole a close control over production of both crude and products, and would have given our industry—which modern refinery development has endowed with an unusual degree of flexibility of manufacturing capacity—all of the needed facilities for the proper balancing of output and consumption.

Intensive Integration

"Some companies in the industry have already recognized the need for more intensive integration of operations, as witness the considerable program of pipe line construction for the account of various oil companies during the past 18 months. Hitherto pipe lines have been built into the fields to take their flush production entirely regardless of an orderly development, and correspondingly pipe lines have had unsettled careers with widely varying throughput from year to year. Witness the plight of some of the transporting and purchasing companies which now find themselves hung up with heavy inventories of high priced crude in a record low market for that product. The tendency to build pipe line systems as an adjunct to producing, refining and marketing operations is a step in the right direction; further unitization to provide true reserves to assure steady sources of supply of crude—the raw material for manufacturing plants—over a long period of years will further enhance the benefits of this pipe line building. These true reserves now being created can, in the final analysis, fully benefit only those who are thoroughly integrated.

"In our modern civilization there is only one profit in any industry, and to derive that profit man must locate his raw material, take it through all the varying processes, and sell it over the counter to the ultimate consumer. The oil industry, like all other basic industries, must pattern its operations to conform with the inflexible and irresistible laws of supply and demand, or suffer the consequences."

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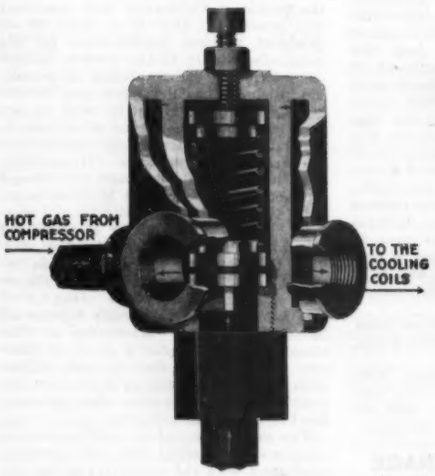

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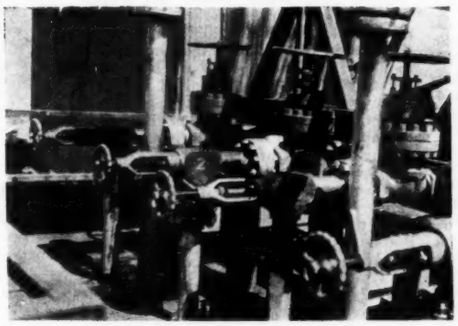

A Kettleman Hills installation showing 4 of the 7 Shaffer Adjustable Flow Beans in the Christmas Tree.

In the New **EAST TEXAS FIELD, AS IN ALL OTHER FIELDS, SHAFFER FLOW BEANS**

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This device controls the flow of oil and gas from a well, throttling it to any desired pressure and rate of flow. The simple handwheel control permits minute adjustments without disturbing the current of oil and gas coming through the flow lines. The venturi tube construction (which is controlled by our patents) insures the smoothest possible flow. It is extremely strong and the gauge is easily read. The most popular high-pressure valve for controlling the world's biggest producers. Made in six standard sizes: 6-inch, 4-inch, 3-inch, 2½-inch, 2-inch and 1-inch.

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HOUSTON—Robt. J. Miller Co.
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SHAFFER *adjustable* FLOW BEAN

PRICES NEAR BOTTOM SAYS H. F. SINCLAIR

(Continued from Page 112)

dent, states, held 6,573,746 acres under oil concessions for exploration and exploitation, all located in Venezuela, of which 4,802,000 acres may be finally retained for exploitation pursuant to the terms of Venezuelan petroleum law. As a result of drilling operations during the year Creole increased its estimated proven acreage from approximately 1,000 acres to 5,000 acres.

The company during 1930 produced 6,859,806 gross barrels of crude oil, daily average of 18,974 bbls. compared with 7,679,279 bbls., daily average of 21,039 bbls. in 1929. Of the above 5,671,390 bbls., came from the jointly operated Gulf-Creole properties in the Maracaibo Basin. The Quiriquire Field in eastern Venezuela was placed in operation in August and produced 1,067,051 bbls. of crude oil, daily average of 7,568 bbls. to December 31, 1930. The 8-inch pipe line from Quiriquire Field, and the terminal facilities on the San Juan River were completed and placed in operation.

During the year Creole executed agreements with other companies holding concessions adjoining its own for unit operation, in order to obtain maximum recovery of oil at minimum cost. Under these agreements, affecting four other companies, Creole contributed 148,366 acres out of a total of 326,114 acres, comprising the pooled areas in eastern Venezuela. In western Venezuela, Creole pooled 272,000 acres on Paraguana Peninsula with 162,000 acres belonging to another company, under an agreement providing that the other company spend $250,000 in development of the joint concessions, after which an operating company may be formed in which Creole would own a one-third interest.

Shell Union

Shell Union Oil Corp. declared the regular quarterly dividend of $1.37½ on the preferred, payable July 1, to stock of record June 10.

British American Oil

British American Oil Co., Ltd., has declared the regular quarterly dividend of 20 cents, payable July 2 to stockholders of record June 13.

Middle States

Middle States Petroleum Corp. has declared an initial dividend of 22 cents on the A stock, payable June 1 to holders of voting trust certificates of record May 25.

Mountain Producers

Report of Mountain Producers Corp. and its subsidiary, Wyoming Associated Oil Corp. for year ended December 31, 1930, shows profit of $2,737,770 after expenses and royalties, but before depletion and Federal taxes, comparing with $3,089,355 in 1929. After deduction of $207,549 Federal and state taxes, profit before depletion was $2,530,221 against $2,916,490 in preceding year. Capital stock amounts to 1,682,182 shares, par $10.

With regard to dividends, the last quarterly payment being 25 cents, John T. Barnett, president of Mountain Producers Corp., says: "It is hoped that the current income for the year will be sufficient to maintain this rate. This will depend, however, largely upon the wholesale price of gasoline and kerosene, upon which our price of crude oil is based. At present the price structure is weak."

Development of East Texas oil district, Mr. Barnett says, shows holdings of Saltmount Oil Co., which is financed equally by Salt Creek Producers Association and Mountain Producers, to be of good value. A considerable earning from this source will be realized this year, he says, which will increase as the field is drilled up.

Mountain Producers acquired last year undivided 18¾ per cent interest in Midway, Geary and North Geary Domes, covering approximately 24,000 acres between Casper, Wyo., and Salt Creek Field. Practically all the company's Salt Creek producing acreage, excepting Tensleep sand, has been drilled, and wells are producing at capacity. Production of the company last year, amounting to 2,888,450 bbls. net, was 10 per cent below the 3,174,306 bbls. produced in 1929, and "it may be expected that a ratable decline from the producing sands will continue," Mr. Barnett says.

Consideration is being given to unit operation in Salt Creek Field, particularly with reference to the Tensleep sand, pursuant to congressional amendment of the General Leasing Act under which the company holds a large percentage of its Salt Creek acreage.

Columbia Gas & Electric

Columbian Gas & Electric Corp. reported first quarter net income of $8,940,011 compared with $10,591,961 in the same period of 1930. Gross revenues amounted to $28,937,309 against $30,768,047. The decrease, said Philip G. Gossler, president, was largely due to industrial conditions and the depressed prices for gasoline and oil.

In the 12 months ended March 13 net income totaled $24,498,798, or $1.59 a common share, against $30,756,142, or $2.13 in the period ended March 31, 1930.

Cities Service

Cities Service Co. gross earnings for the 12 months ended April 30, 1931, increased slightly to $53,715,817, compared with $52,650,042 for the corresponding period a year ago. Net earnings were $51,028,627 compared with $51,071,832. Gross and net earnings for April, 1931, were $3,436,088 and $3,245,392 respectively, compared with $5,197,022 and $5,021,753 for April, 1930.

Cities Service Co. announced monthly dividends of 2½ cents per share in cash and one-half of 1 per cent in stock on the common stock. Regular monthly dividends of 50 cents per share on the preferred stock and preference BB stock and 5 cents per share on the preference B stock were announced, all payable July 1 to stockholders of record June 15.

Plymouth Oil

Profit of Plymouth Oil Co. for quarter ended March 31, 1931, was $289,098 after depreciation, depletion, etc., but before federal taxes. At the annual meeting directors and officers were re-elected. The board membership was increased to 11 from 9. Paul G. Benedum and T. R. Cowell were elected to the board.

Western Exploration

Western Exploration Co. has declared a dividend of 2½ cents per share payable June 20, 1931, to stockholders of record June 15.

Rio Grande Oil

Rio Grande Oil Co. reports for quarter ended March 31, 1931, net profit of $60,691 after depreciation, depletion, federal taxes, etc., equivalent to 5 cents a share on 1,236,270 no-par shares of capital stock. This compares with $1.204,265 or 97 cents a share in first quarter of 1930.

Twenty Representative Stocks

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange and New York Curb, based on closing quotations for Wednesday, was as follows:

Oct.	1	37.73	Jan.	28	27.26
Oct.	8	35.35	Feb.	4	27.26
Oct.	15	35.21	Feb.	11	28.76
Oct.	22	31.88	Feb.	18	28.53
Oct.	29	32.80	Feb.	25	29.32
Nov.	5	31.77	Mar.	4	27.67
Nov.	12	30.18	Mar.	11	26.53
Nov.	19	31.54	Mar.	18	26.78
Nov.	26	30.86	Mar.	25	26.35
Dec.	3	30.53	Apr.	1	24.80
Dec.	10	28.57	Apr.	8	25.52
Dec.	17	25.42	Apr.	15	24.72
Dec.	24	25.68	Apr.	22	22.73
Dec.	31	26.15	Apr.	29	20.54
Jan.	7	27.56	May	6	20.74
Jan.	14	27.31	May	13	20.38
Jan.	31	27.55	May	20	19.25

North Central Texas Oil

North Central Texas Oil Co., Inc., reports for quarter ended March 31, 1931, net profit of $7,531, after depletion, property write-offs and federal taxes, comparing with $45,954 in first quarter of 1930. Capital stock consists of $390,000 of 6½ per cent preferred and 262,600 no-par common shares. The directors declared the regular quarterly dividend of $1.62½ on the 6½ per cent preferred stock, payable July 1 to stock of record June 10.

Kansas Standard

Standard Oil Co. of Kansas has omitted the quarterly dividend of 25 cents due at this time.

A. S. Hopkins, president, issued the following statement: "The management deems it wise and to the best interests of the stockholders that company's cash and other quick assets be conserved at this time. By so doing we will be in a position to acquire additional properties at present low prices that should tend to strengthen our position in the industry."

Pan American Petroleum

Report of Pan American Petroleum & Transport Co. (a subsidiary of Standard Oil Co. of Indiana) and subsidiaries for year ended December 31, 1930, shows net profit of $13,743,524 after interest, depreciation, depletion, federal taxes, minority interest, etc., equivalent to $4.02 a share (par $50) on 3,416,088 combined common and common B shares outstanding at end of year. This compares with $9,825,992 or $2.92 a share on 3,360,698 combined shares at end of 1929.

Increased earnings in 1930 over the previous year, despite reduced realizations on all products, were brought about principally by decreased cost of gasoline manufactured and sold, which in turn was due to reduction in cost of crude purchased and the operation of the Aruba plant, and also to material economies that were effected in all departments during the year.

The net increase of $10,991,811 during the year in fixed assets was principally occasioned by extension of marketing facilities, but also covers additions in all other departments.

With acquisition of the outstanding minority interest in Lago Oil & Transport Corp., that corporation has been dissolved and its assets and liabilities taken over by Pan American Petroleum & Transport Co.

Production of crude from all fields for last year by Pan American Petroleum & Transport and its subsidiaries totaled 47,251,051 bbls., against 50,611,783 bbls. in 1929. Decrease was due to voluntary restriction of output. Crude reserves of Venezuelan properties were further developed during the year.

At the close of last year current assets were $67,883,351 and current liabilities $13,728,307, a ratio of 4.94 to 1. Cash, government, state and municipal bonds and short term notes totaled $30,458,418.

Mexican Petroleum

The Mexican Petroleum Co., Ltd., a subsidiary of the Pan American Petroleum Co., reports a consolidated net income of $2,374,561 after all charges and taxes for the year ended 1930. This compared with $6,051,518 for the previous year.

Seaboard Oil & Gas

Directors of the Mexican Seaboard Oil Co. voted to change the company's name to Seaboard Oil & Gas Co. because the company is no longer a principal operator in Mexico, where its production has dropped to an average of 4,000 bbls. daily.

John M. Lovejoy, president, in commenting on the company's operations, said that income from the sale of natural gas to the Pacific Gas & Electric Co. was increasing and that higher returns are anticipated for the second quarter from oil accruing from the company's interest in the North Dome of Kettleman Hills.

The company reports for the first quarter of 1931 consolidated net income of $53,155, after depreciation, depletion and intangible drilling costs, but before federal taxes, as compared with net of $291,539 in the first quarter of 1930.

Richfield Oil, New York

The position of Richfield Oil Corp. of New York, which has been considerably clouded since the placing of Richfield Oil Co. of California, the parent organization, in receivership, was considerably cleared up by an order issued by the United States District Court for the southern district of California, central division, authorizing William C. McDuf-

WIRT FRANKLIN URGES STERLING TO CALL SPECIAL SESSION IN TEXAS

Wirt Franklin, president of the Independent Petroleum Association of America, and Orville Bullington, of Wichita Falls, Tex., have sent the following telegram to Gov. R. S. Sterling of Texas:

"R. S. Sterling, Governor,

"Austin, Tex.

"For more than two years the Independent Petroleum Association of America, with the support of state divisions thereof, particularly Texas, has waged relentless campaign to secure a tariff on oil or substantial limitation of imports in the interest of stabilizing the domestic oil industry. As part thereof we have consistently advocated balancing of domestic supply with demand, realizing that unless this was accomplished tariff or limitation of imports would be of little benefit. All the principal oil producing states, except Texas, have accomplished full stabilization supported by state laws. For example, Oklahoma could now supply for some time the entire demand of United States but is only producing about 535,000 bbls.

"Texas must co-operate unless entire industry is to be destroyed, and the first destroyed will be the thousands of small independent producers who are least able to weather the storm East Texas will see the depletion of its vast petroleum reserves without adequate compensation therefor. In the interest of the small independent producers in Texas and throughout the United States we appeal to you to immediately call a special session of your legislature for enactment of a conservation law enabling effective control of production in Texas similar to control thereof in Oklahoma, which law, however, should contain provisions for ratable taking of oil from all producers in a common pool and stringent provisions preventing discrimination between producers in a common pool, and providing allocation of market demand among various pools of the State with severe penalties for violators thereof in order that the thousands of small producers without pipe line facilities may be assured of equitable treatment and full protection.

"We are informed that fully 90 per cent of the independent producers of Texas favor this legislation to stabilize the oil industry and give them assurance of ratable taking of oil and a market for their production on a basis of equality with the major companies. The Oklahoma law has accomplished this and protects the weak against the strong. We hope you will call this session without delay as delay may be disastrous.

(Signed)

"WIRT FRANKLIN,
"Ardmore, Okla.
"ORVILLE, BULLINGTON,
"Wichita Falls, Tex."

FRANK PHILLIPS WIRES TO GOVERNOR OF TEXAS

NEW YORK, May 25.—Frank Phillips, president of Phillips Petroleum Co., Saturday sent the following telegram to Gov. R. S. Sterling, Austin, Tex.:

"Phillips Petroleum has extensive oil interests in Texas and we are therefore vitally interested in the East Texas situation. It seems to us that it is imperative that an immediate special session of the legislature be called to deal with this most serious situation in Texas, which is threatening to demoralize the entire industry. Overproduction, present and prospective, is the outstanding force today depressing the oil industry, and in the long run, unless constructive legislation is enacted in Texas at once, it is quite probable that Texas itself will be the greatest sufferer. If the present price structure, which is threatened, does not hold it will no doubt mean a longer period of much lower prices and demoralization and it will take a much greater time to restore prices to proper levels."

fie, receiver for the parent company, to permit of the normal operation of Richfield Oil Corp. of New York and its subsidiary and controlled companies.

The order of the court, issued on the petition of Receiver McDuffie, provides in part as follows:

"1. That all of the actions of William C. McDuffie, as receiver of Richfield Oil Co. of California, with respect to the operations of the defendant's subsidiary corporation, Richfield Oil Corp. of New York; Peerless Oil Co. of Delaware; Acewood Petroleum Sales Corp.; Walburn Petroleum Co., Inc.; Richfield Oil Corp. of Massachusetts; Richfield Oil Corp. of Virginia; Cleary's Stations, Inc., New York; Northwestern Oil Co., Inc., New York; Tiona Refining Co., Pennsylvania; Sherwood Brothers, Inc., Maryland, and Lamson Oil Co., Rhode Island, to date of the filing of his petition, May 12, 1931, be ratified, confirmed and approved.

"2. That until further order William C. McDuffie, as receiver, be directed to require Richfield Oil Corp. of New York and its subsidiary and affiliated companies to continue to conduct and operate their respective businesses and properties in substantially the same manner as they were being conducted and operated.

"3. That until the further order Richfield Oil Corp. of New York and its subsidiary corporations continue to make payment of obligations and liabilities, provided that the total amount shall not be increased beyond the amount existing on the date of the filing of such petition, excepting, however, such obligations and liabilities as may have been incurred or may hereafter be incurred in the regular and usual course of business.

"4. That until the further order William C. McDuffie, as receiver, may, in his discretion, continue to aid Richfield Oil Corp. of New York and its subsidiary and affiliated companies, in the conduct of its and their respective business operations as follows:

"(a) By granting credit to Richfield Oil Corp. of New York, whether by loans of cash or other forms of credit;

"(b) By postponing payment of amounts due William C. McDuffie as receiver, or due Richfield Oil Co. of California prior to the appointment of the receiver, on account of sales and deliveries of gasoline and petroleum products made by the receiver or by the defendant corporation, or on account of any other obligation due from the Richfield Oil Corp. of New York, whether incurred prior or subsequent to the appointment of William C. McDuffie, as receiver;

"(c) By making sales and deliveries of all or part of the requirements of Richfield Oil Corp. of New York and of its subsidiary and affiliated companies for gasoline and petroleum products for resale by it or them in the regular or usual course of business, such sales and deliveries to Richfield Oil Corp. of New York to be made on such terms and conditions as may be approved by the said William C. McDuffie, as receiver; and

"(d) By such other means and methods as said William C. McDuffie, as receiver, in his discretion may determine."

FUEL OIL PRICES CONTINUE DECLINE

(Continued from Page 12)

duced to get gas oil charging stock. With low crude oil prices, together with the fact that most refiners have enough fuel oil and gas oil from their own skimming operations, there is very little inter-refinery demand for cracking stock. When the shipment between refineries is any distance the freight rate amounts to 25 to 60 cents per barrel and this makes a delivered cost to the purchaser which is prohibitive when compared to present crude oil and gasoline prices.

There are some who predict that the fuel oil market will improve starting in the midsummer. It is believed that the industrial and public utility demand will show some improvement at that time to which will be added the usual seasonal improvement which will be particularly noticeable in the low cold test grades. At present many refiners who are in a position to do so are storing excess fuel oil, gas oil and furnace oil. It is felt that the furnace oil demand will be as great as it was for the summer just closed and this may mean that material now worth around 1½ cents per gallon will bring a premium of at least 1 cent.

Gasoline and Naphtha

U. S. Motor gasoline is available from several Oklahoma sources at 2¾ cents with scattered sales reported as low as 2½ cents. There was very little optimism regarding the gasoline market as the last week of the month opened. East Texas gasoline which more than meets U. S. Motor gasoline specifications in distillation range has been sold as low as 2½ cents basis Group 3 and more and more material will be available as new plants are started up. It had been hoped that the bulk of the East Texas refinery gasoline could be moved south to the Gulf Coast for export and coastwise movement. Freight rates to that area are lower than to competitive points to the north. The Coastal market is as depressed as the Mid-Continent so that now most of the movement is to the north.

The higher gravity grades start at 2⅞ cents for 60-62 400 endpoint, 3⅛ cents for 390 endpoint, 3¼ cents for 375, and 3⅜ cents for 350 and 360. The demand is not active at these prices.

A 440 to 450 endpoint naphtha regardless of gravity which is sweet will bring a low of 2⅞ cents in Oklahoma and some sales at 3 and 3⅛ cents have been reported. These grades are in demand due to the fact that they will stand heavy blends of natural gasoline.

Natural Gasoline

Natural gasolines were holding to the price advances of the previous week. Sellers are now more interested in June business than for delivery over the next few days. So far, no large orders for June delivery have developed although it is known that some important business is pending. Naturals will require steady outlets during June if present quotations are to be maintained.

More and more manufacturers are becoming interested in the possibilities of so-called "stabilized grades." The active operating head of one of the largest manufacturing organizations at the annual meeting of the Natural Gasoline Association of America last week advised the smaller manufacturers to stabilize their output so that it could be used as motor fuel without blending and this is being done by both small and large operators.

Specifications of these stabilized grades vary. Usually the gravity is from 70 to 75, under 95 initial, 11 to 15 pounds vapor pressure, minimum recovery 97 and 340 to 350 endpoint. Such a product brings the low of the U. S. Motor market. Although manufacturing losses are heavy this method at least provides an outlet and tends to reduce the quantity on the market at distress prices.

Other Products

Bright stock prices were again lowered by several manufacturers. Some manufacturers are reducing prices to whatever levels are necessary to hold their customers. One sale of high cold test material at 13 cents was reported last week. The same situation applies to the steam refined stocks.

Neutral oils are in slightly better shape. The Pennsylvania refiners are maintaining their prices on neutrals better than they have on cylinder stocks so there is not so much overlapping between the Mid-Continent and Pennsylvania products. More inquiries for wax are reported with no large orders actually placed.

SAN JOAQUIN VALLEY PRODUCERS MEET AND DISCUSS THEIR PROBLEMS

TAFT, Calif., May 23.—The regular meeting of the San Joaquin Valley chapter of the American Petroleum Institute was held here with 100 members and guests in attendance. A constitution and by-laws proposed for adoption by the chapter was accepted by an unanimous vote.

"Whither Goes the Oil Industry, and Why," was the subject of an interesting talk by R. E. Allen, assistant umpire, California proration. Allen stated that due to the depression and a reduction in our shipments to the Atlantic Seaboard. it is estimated that the maximum demand for California crude in the next six months will probably be 459,000 bbls. per day. He also said that to keep in line with this figure plans are under way to curtail the allotment for the State (exclusive of Kettleman Hills), to 427,000 bbls. per day in the immediate future.

Curve charts were shown on a screen depicting California production and consumption, and also the production of the United States for recent years. Mr. Allen explained in a general way the causes for the changes in production as represented and gave some conditions.

Reference was made to the Sharkey Bill recently passed by the California state legislature. This bill creates a provision for future prorating of production of petroleum in the State. That part of the bill alluding to waste was pointed out, particularly that "waste" is defined as that part of petroleum production that is not obtained economically or for which there is no willing market. It was stated that the new bill will not become active for a period of 90 days.

Mr. Allen emphasized the fact that now heavier oil production at Kettleman Hills will affect the heavy oil production in other parts of the State. It was stated that there are two influencial forces at work in the state's industry, one constructive, the other destructive. Some of the destructive forces are now being handled by receivers.

In closing his talk he gave it as his personal opinion that the industry will have its affairs in such shape during the next few months that there should be improvement by fall.

George O. Suman of the Associated Oil Co. read a paper "Flooding, Washing and Hydraulicking Wells."

This paper explained some of the methods and results that have been obtained from cleaning wells by the circulation of oil and water fluids.

Some of the reasons known and suspected as to why oil cannot enter a hole through the sand face or through the perforations were listed:

1. Mud laden fluid used in drilling and never removed from behind the oil string.
2. Caving shales between oil sands breaking down into mud fluid when washed by water.
3. Collection of paraffin or tar behind the oil string.
4. Filling of voids in oil sand back of the oil string by finer sand carried towards the hole by the oil.
5. Shale particles in shale strata in oil zone breaking off and lodging against perforations.

The flooding or washing of wells was explained as a circulating action of fluid directed against the points where the clogged condition was aggravated. The circulation was intended to cleanse the perforations and wash the sand face to permit the full flow of production from the sand into the well hole.

It was brought out that oil was generally used as the circulating fluid. However, water was found to be beneficial in many cases.

The oil circulating process utilizes a string of tubing to carry the fluid to the desired point in the well, and so fitted as to be moved up and down during the process. Many different tools are available for use at the bottom end of the tubing to provide variations in the application of the fluid against the perforations or wall face to be cleaned.

Many wells where the method has been tried have shown increases in production of from 50 to 100 per cent due to the cleaning operation.

Hydraulicking was described as a process used to remove sand from a well by circulation of oil. This process was reported as being a quicker and cheaper method of cleaning many wells than by the use of ordinary clean out tools.

TWO NEW PAPERS ADDED TO PROGRAM AT DALLAS

As the date for the midyear meeting of the Division of Production of the American Petroleum Institute to be held in Dallas, Tex., June 3 and 4, approaches, the committee in charge of activities is rapidly completing details and the final release of program indicates that the one printed in The Oil and Gas Journal of May 14, page 35 and 127, is approximately correct except that the order of presentation of some papers will be reversed.

Two papers have been added, one by Robert E. Allen, assistant umpire, for California, Los Angeles, Calif., "Plan for Allocating Production Percentages Under Proration."

Dr. K. H. Logan, United States Bureau of Standards, Washington, D. C., is scheduled to make a report of "Soil Corrosivity Surveys," during the Thursday morning session following Dr. Gordon N. Scott's report of progress made in the cooperative corrosion test now being carried on under his supervision.

OIL MAN'S CALENDAR

MAY

28—Warren, Pa., National Petroleum Association, Fire and Safety Marshals.

JUNE

2—Longview, Tex., A.P.I. Board of Directors Oil Field Tour.

2-5 — Washington, D. C., 24th National Conference on Weights and Measures, Bureau of Standards.

3-4—A.P.I. Division of Production, Baker Hotel, Dallas, Tex.

5—Fort Worth, Tex., A.P.I. Board of Directors, Texas Hotel.

8-11 — Toronto, Canada, National Association of Purchasing Agents, Royal York Hotel.

10-12—Swampscott, Mass., American Institute of Chemical Engineers.

15-18—Madison, Wis., fourth annual oil and gas power meeting, American Society of Mechanical Engineers.

15-19 — White Sulphur Springs, W. Va., summer meeting, Society of Automotive Engineers.

18-19 — Charleston, W. Va., West Virginia Oil Marketer's Association, Daniel Boone Hotel.

22-26—Chicago, annual meeting, American Society for Testing Materials.

29-30—Chicago, National Association of Taxicab Owners.

AUGUST

10—Denver, Colo., Oil States Advisory Committee.

SEPTEMBER

1-3—Cleveland, Ohio, 20th national aeronautic meeting, Society of Automotive Engineers.

16-18—Atlantic City, N. J., annual meeting, National Petroleum Association, Hotel Traymore.

28-29—Atlantic City, N. J., National Association of Motor Bus Operators, Hotel Ambassador.

OCTOBER

2-3 — Houston, Tex., Petroleum Division, American Institute of Mining and Metallurgical Engineers.

12-16—Chicago, National Safety Council.

14-16—Pittsburgh, Pa., Society of Industrial Engineers.

NOVEMBER

10-12—Chicago, Twelfth annual meeting, American Petroleum Institute, Stevens Hotel.

16-21 — Pittsburgh, Pa., Third International Conference on Bituminous Coal, Carnegie Institute.

DECEMBER

7-12—Atlantic City, N. J., Trade Show, Motor and Equipment—National Standard Parts Association.

28-31—Tulsa, Geological Society of America, Mayo Hotel.

Three More Companies Agree to Curtailment In East Texas Fields

LONGVIEW, Tex., May 26. — A. B. Capers and Rae Richmond, proration umpires of the Lathrop and Kilgore areas, respectively, announced today that effective at once 17 wells, formerly running as "outlaw" production, had come into proration observance.

They said the production represented holdings of five companies.

Cranfill & Reynolds announced that their Lathrop well was being pinched today at noon. Mr. Richmond stated that the same firm had four Kilgore producers which will be affected by the observance.

In addition, Mr. Richmond said, 12 wells in the Henderson Field would be on a proration basis today at noon. These represent production of the Imperator Oil Co., George Anderson, Shaw Oil Co. and the McIntyre Drilling Co., according to Mr. Richmond.

LATHROP'S POTENTIAL RATED 109,994 BARRELS

LONGVIEW, Tex., May 23. — The Lathrop Pool of Gregg County has an average unit potential of 109,994 bbls. of oil daily. This production is obtained from 68 wells owned by 41 different operators, as of May 16.

These figures were arrived at by the proration umpire for this district, A. B. Capers. The Lathrop Pool with the 109,994 bbls. daily potential has an allowable of 35,000 bbls. daily for the second half of May.

Figures released show that the actual well potential of the Lathrop Pool, gauging being done through eleven-sixteenths-inch choke on 2½-inch tubing, was 153,215 bbls. daily.

The Arkansas Fuel Co. is leading the list of producers, while the Yount Lee Oil Co. is listed as second.

The average unit potential and allowable by companies in the Lathrop district as set for the last half of the month of May follows:

	Potential	Allowable
Arkansas Fuel	18,223	5,800
Angeline-Burnett	1,200	383
Blackstock	1,140	364
Bridwell	1,860	593
Barnsdall	2,258	719
Black-Knight	1,438	458
Badgett & Cooper	1,944	618
Crump and Hanagan	3,396	1,081
Columbia	1,164	371
Cranfill & Reynolds	1,200	382
Danciger	2,256	718
Delaney	2,400	764
East Texas Refining	3,060	974
Eslick & Little	2,400	764
F. H. E.	2,400	764
Lampton	1,902	348
I. C. Little	1,092	348
Lucey	2,400	764
Magnolia	5,392	1,696
Marlin	1,092	357
MacMillan	2,304	753
Moss et al	1,176	374
Mid-Kansas	1,752	557
Mudge	2,448	779
Mullendore	2,088	634
Navarro	840	276
Olvey et al	1,104	351
Pilot	1,500	477
Republic	1,992	634
Roeser-Pendleton	3,424	1,089
Selby	3,120	993
Simms	2,172	691
Stanolind	3,564	1,134
Shano	2,400	764
Skipper Oil	1,320	420
Skipper-Bivens	1,200	382
Skipper-Hall	2,064	657
Sultan	1,632	529
Woodley	2,310	765
Yount Lee	11,664	3,711
Total	109,994	35,000

STATEMENT OF USE NOW ACCOMPANIES PURCHASE

(Continued from Page 106)

by anyone for any other purposes than that set out in such statement, and that it shall not be used for the purpose of operating and propelling vehicles on public roads, state highways, streets and alleys. The state oil inspector shall require every dealer selling such fuel to forward to him monthly all such signed statements, or true copies thereof. It shall be and is hereby made the duty of the state oil inspector to enforce the provisions of this section."

A further section states: "That all salesmen of gasoline as provided in this act shall furnish a bond in favor of the State of Kansas in the sum of $500 with sureties to be approved by the state oil inspector. Such bond shall be conditioned that there will be repaid to the State of Kansas any sum of money which it may lose through the violations of any of the provisions of this act, and such bonds shall be filed with the state oil inspector."

The dealers collect these statements for the month and deduct the total amount of gallons of nontaxed gasoline sold and deduct the same from the gasoline imported. Dealers also make a sworn statement that they guarantee that the nontaxed gasoline will not be used in motor fuels. Should evidence be secured that a violation has been made of the law, the jobber is guilty of a misdemeanor, and shall be fined not more than $100.

Late Fields

(Continued from Page 24)

southwestern edge of the field, cored a sand at 3,521-32 feet, with a showing of oil. It will be drilled deeper before being completed.

Gypsy Oil Co.'s No. 2 Harjo, NE cor. NW SE, Section 18-9-7, in the East Seminole area, of Seminole County, was drilling in the Wilcox sand at 4,333-37 feet, with a showing of oil.

Stanolind Oil & Gas Co.'s No. 2 Haynes, NE cor. SW, Section 32-5-5, in the Beebe Pool, in Pontotoc County, flowed 120 bbls. of oil in 12 hours, from a total depth of 2,190 feet, and was landing casing at 2,225 feet to drill deeper.

In the Tatums Pool, in Carter County, Trevlyn Oil Co. has staked a location for No. 1 Ratcliff, NE cor. NW SW, Section 19-1s-2w. It is located about a quarter of a mile southeast of production in the field.

F. Gouin and K. D. Oil Co.'s No. 1 Burton, C SW NW, Section 30-1s-2w, landed surface pipe at 30 feet and was shut down waiting for cement to set. The test is located about three-quarters of a mile south of production in the field.

Amerada Petroleum Corp. and others' No. 1 Jones, SE cor. NW, Section 21-8-3, a wildcat in Pottawatomie County, was drilling in the Hunton lime at 4,850 feet, with a showing of oil and water.

Blackwell Oil & Gas Co.'s No. 1 Holmes, SW cor. NE SW, Section 9-7-8, found the top of the sand at 2,923 feet with a showing of oil and gas. The casing was being cemented at a total depth of 2,925 feet.

KANSAS

Several new wells were completed in the Ritz-Canton Pool, McPherson County, Kansas. Lario Oil & Gas Co.'s No. 1 Lagree, NE cor., Section 31-19-1w, made 1,750 bbls. by swabbing in 12 hours and is given a potential of 3,500 bbls. a day.

Reynolds & Unruh's No. 1 Koehn, NW cor. SW, Section 31-19-1w, was flowing an estimated 500 bbls. of oil a day from the chat at 2,933-71 feet. The operators are planning to drill deeper.

G. P. Dickey and others' No. 1 Decker, SE cor., Section 35-19-2w, which was given a potential of 6,722 bbls. a day is allowed to produce 540 bbls. each day under the recent order allowing 8 per cent of the potential from all wells in the Ritz-Canton Field.

McPherson Oil & Gas Co. and Shell Petroleum Corp.'s No. 3 Decker, C SE NE, Section 11-19-2w, in the Decker gas field, was drilled deeper and increased its gas flow to 51,250,000 feet a day from the chat at a total depth of 2,939 feet.

Lario Oil & Gas Co. and Shell Petroleum Corp.'s No. 2 Lagree, SE cor. NW, Section 31-19-1w, had a hole full of oil from the Viola lime at 3,393-3,403 feet. Operators were preparing to make a production test.

Stanolind Oil & Gas Co. and Carter Oil Co.'s No. 1 Martin, NE cor. SE SE, Section 3-16-3w, a wildcat in Saline County, found a showing of oil at 3,299 feet and is underreaming the casing to land it on top of the formation.

Fisher & Lauck's No. 1 Souders, in Section 1-28-1, a wildcat in Sedgwick County, south of production in the Eastborough Pool, found water in the Silicious lime at a total depth of 3,458 feet. The test will probably be abandoned.

E. B. Shawver's No. 1 Robbins, in Section 21-28-1, in the Robbins Pool, in Sedgwick County, was drilling deeper after finding a 10-bbl. showing of oil in the chat at a total depth of 3,087 feet. The test had the top of the lime at 3,132 feet and was drilling in lime at 3,230 feet.

Continental Oil Co. and Shell Petroleum Corp.'s No. 1 Blake, SW cor. SE SE, Section 23-23-4w, a wildcat well in Reno County, was opened up after being shut in for two weeks and made 9,800,000 feet of gas a day. It formerly made 8,500,000 feet a day. The rock pressure of the well was 1,140 pounds. It was shut in until a market outlet is found.

Shell Petroleum Corp. is preparing to drill two of its producing wells deeper in the Lygrisse Pool, in the eastern part of Sedgwick County. One of the wells is No. 7 Fisher, NW cor. SW, Section 15-26-2, old total depth being 2,916 feet. The other is No. 3 A. Lygrisse, C SW NE, Section 15-26-2, old total depth being 2,901 feet.

CANADA

CHATHAM, Ontario, May 25.—Merland Oil Co.'s No. 1, Section 27-18-2w5, in the far south end of Turner Valley, has come in with production of 26,000,000 feet from the deep lime. Crude naphtha recovery is estimated at 300 bbls. or better. The test, started originally by Merland Oil Co. and completed by Imperial Oil, Ltd., marks a considerable extension southward.

SOUTHWEST TEXAS

SAN ANTONIO, Tex., May 26.—Gulf Coast Oil Co.'s No. 2 McKinney, in north edge of Pettus area in Bee County, at 3,730 feet, tested 1,100 pounds dry gas. There are two other producers, one gas and one oil in the same area 3 miles north of Pettus townsite and Ray-McKinney Pool, each producing at about 3,686 feet. Difference in elevation can scarcely make up for the difference in depth and hence it seems to be a new sand. It is estimated at 20,000,000 feet of dry gas.

In Saxet Field in Nueces County, Gulf Coast Oil Co.'s No. 1 Harrell, on the north edge of the field at 4,084 feet in 10 minutes on drill stem test showed 600 pounds of dry gas. There are several oil and gas producers at about that depth and this extends the field nearly a mile in width at about the middle of the field.

Saxet Oil Co.'s No. 8 Dunn, in the older part of the Saxet Field, at 4,277 feet on drill stem test showed 5 fourbles of oil and no water. There are only two other producers at approximately same depth, one at 4,296 feet and the other at 4,300 feet.

In Caldwell County, near Dale Field, Ogden's No. 1 Alexander topped Edwards lime at 2,330 feet and 8 feet in is showing oil and testing. It looks like at least a small well. Dry holes around it in years past will seemingly operate to limit the acreage in the field if one is opened.

MAJOR COMPANIES' RUNS FROM EAST TEXAS FIELD

LONGVIEW, Tex., May 23.—A. B. Capers, local proration umpire, announces the following pipe line runs being made by the larger companies in the East Texas Field, the total aggregating 72,358 bbls. daily:

Arkansas Fuel Oil Co., own production, 5,800 bbls.; outside purchases, 9,660 bbls.; total, 15,460 bbls.

Gulf Pipe Line Co., own, 8,623 bbls.; outside, 349 bbls.; total 8,972 bbls.

Humble Oil & Refining Co., own, 12,688 bbls.; outside, 18,934 bbls.; total, 31,622 bbls.

Magnolia Petroleum Co., own, 5,435 bbls.; outside, 3,587 bbls.; total, 9,022 bbls.

Sinclair-The Texas Company, own, 1,863 bbls.; outside, 4,631 bbls.; total, 6,494 bbls.

The Texas Company, own, 788 bbls.; outside, none.

On June 1, the Arkansas contemplates increasing its runs to 25,000 bbls. daily.

The Magnolia, Arkansas, Gulf, Humble and The Texas Companies have been paying Mid-Continent prices since proration was made effective in the field as of May 1. Sinclair-Texas posted Mid-Continent prices May 12.

Mr. Capers says The Texas Company has announced it would purchase ratably up to 10,000 bbls. daily at Mid-Continent prices. The Gulf Pipe Line Co. has advised that it would share its market ratably with producers as requested by the umpire at Mid-Continent prices.

In the Longview area, the Arkansas Fuel Oil Co. has been serving all unconnected properties.

E. T. BEDFORD DEAD

WESTPORT, Conn., May 23. — Edward Thomas Bedford, one of the last survivors of the pioneers who developed the American oil industry, died Thursday at Greens Farms, his summer home. The capitalist had been in ill health for about two years. He was 82 years old.

A contemporary of the Rockefellers, Charles Pratt, Henry H. Rogers, and others in the oil industry, Mr. Bedford was associated with the Standard Oil Co. for many years. He was a director and member of the executive committee of the Standard Oil Co. of New Jersey from 1903 until 1911.

STERLING'S DECISION NEAR

AUSTIN, Tex., May 26. — Governor Ross S. Sterling said today he probably would decide within two or three days whether to call a special session of the legislature and on what day it would start if he should deem it necessary.

MONTANA LINE CONTRACT

BUTTE, Mont., May 23.—The major contract of Montana Power Co.'s $15,000,000 natural gas line from the Cut Bank Field in northern Montana to towns and cities in the southwestern part of the State has been awarded to the Winston Brothers of Minneapolis, Minn, whose bid was the lowest of eight submitted for the 225-mile main supply line. Montana Power officials stated no more contracts will be awarded at this time.

TEST IN NEBRASKA

LINCOLN, Nebr., May 23.—The Cass Petroleum Co. is drilling with standard tools east of Lincoln and the driller reports the well at a depth of 850 feet. The company is said to be made up of Oklahoma men.

ROOTS-CONNERSVILLE-WILBRAHAM
DIVISION OF INTERNATIONAL-STACEY CORPORATION
Michigan Avenue and 14th Street
Connersville, Indiana

20 North Wacker Drive, Chicago, Illinois
235 Montgomery Street, San Francisco, California
420 Lexington Avenue, New York City

DOWN goes the LAYNE SCREEN

UP comes Production

THE LAYNE

Milled Groove Screen

Such experience is not at all infrequent. In fact on most the wells that the Layne Screen has been installed the production increased as much as 33-1/3% to 100%.

The famous Layne Milled Groove is responsible for this production increase. It not only increases the inlet area of each hole in the pipe but also serves as a direct guide for oil entering the keystone wire wrapping. These grooves extend in opposite vertical directions from each hole in the pipe for a distance of about one inch. The keystone wire, wrapped around the pipe passes over each groove from six to eight times.

As the small edge of the wire is next to the pipe and the shoulder or large edge is to the outside there is no possibility of the screen becoming clogged. The point of entry of the oil into the screen is of course a very narrow gauge, but due to the vertical sides of the keystone wire the oil instantly enters a larger chamber where it goes into the groove and through the pipe holes into the pipe. This feature of the Layne Screen not only prevents clogging but absolutely eliminates sand cutting.

Under severe laboratory tests it was found that the Layne Screen can safely withstand the weight of 8000 feet of casing. Actual field use has demonstrated to thousands of users that there is no other screen to give such a high degree of satisfactory service as the LAYNE.

The Layne and Bowler Co.

HOUSTON, TEXAS

The Layne New York Co.,
30 Church St., New York

The Layne & Bowler Corp.,
Los Angeles, Calif.

Vickers Limited,
London, England

Detailed Operations in All Fields for Month of April

SUMMARY OF ALL FIELD WELLS COMPLETED

Field—	Comp.	Prod.	Dry	Gas
Eastern	90	77	34	38
Central Ohio	31	36	11	15
Lima	9	160	1	6
Indiana	11	75	6	1
Michigan	8	490	2	3
Illinois	0	0	0	0
Missouri	1	0	1	0
Kentucky	66	3,348	24	11
Oklahoma	139	217,891	46	26
Kansas	33	7,353	7	11
Texas Panhandle	23	5,989	4	7
N. Central Texas	93	2,159	63	8
E. Central Texas	242	1,381,888	29	4
West Texas	33	3,502	16	0
Southwest Texas	89	8,941	62	6
East Texas	12	0	11	1
Gulf Coast	80	35,863	36	0
North Louisiana	27	590	13	8
Arkansas	11	943	4	1
Mississippi	11	0	7	4
Wyoming	9	1,377	0	1
Montana	4	0	4	0
Colorado	4	200	0	2
New Mexico	3	5,412	0	0
Total April	1,029	1,666,284	375	152
Total March	895	485,020	348	182
Difference	134	1,181,264	27	30

RIGS AND WELLS DRILLING

Field—	Rigs	Drlg.	Ttl.
Eastern	40	142	182
Central Ohio	34	100	134
Lima	6	24	30
Indiana	6	55	61
Michigan	63	103	166
Illinois	3	22	25
Kentucky	12	129	141
Missouri	0	1	1
Tennessee	0	18	18
Alabama	2	3	5
Mississippi	7	19	26
Oklahoma	80	300	380
Kansas	31	132	163
Texas Panhandle	16	51	67
North Central Texas	20	171	191
East Central Texas	44	156	200
West Texas	13	120	133
Southwest Texas	14	110	124
East Texas	12	31	43
Gulf Coast	13	121	134
North Louisiana	22	57	79
Arkansas	7	31	38
Wyoming	14	86	100
Montana	10	59	69
Colorado	14	71	85
New Mexico	8	47	55
Utah	0	20	20
Total April	491	2,179	2,670
Total March	512	2,326	2,838
Difference	21	147	168

Note—In the following report the Section, Township and Range are given first; then the farm, the owner, the serial number of the well and the initial production of the well. In lines where the Section, Township and Range are missing the wells are located in the Sections, Townships and Ranges which appear next above in the report.

OKLAHOMA FIELDS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas
Bryan	1	0	1	0
Carter	6	2,990	3	0
Cherokee	1	0	1	0
Cleveland	1	75	0	0
Comanche	1	0	1	0
Creek	33	1,449	8	5
Grady	2	0	0	2
Haskell	1	0	0	1
Hughes	3	435	0	2
Jefferson	1	0	1	0
Latimer	1	0	1	0
Lincoln	1	0	0	1
Love	1	0	1	0
Marshall	3	0	3	0
Muskogee	8	40	2	5
Oklahoma	29	203,308	1	0
Okfuskee	0	0	3	0
Okmulgee	6	80	2	2
Osage	7	20	4	1
Pawnee	1	0	1	0
Payne	3	200	1	0
Pittsburg	4	0	2	2
Pontotoc	4	0	3	1
Pottawatomie	4	2,320	0	0
Seminole	11	5,628	3	1
Stephens	1	0	1	0
Texas	1	0	0	1
Tulsa	5	240	3	1
Wagoner	3	0	1	1
Total April	139	217,891	46	26
Total March	102	174,912	36	13
Difference	37	42,979	10	13

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Alfalfa	0	1	1
Atoka	0	2	2
Beckham	1	6	7
Blaine	0	1	1
Bryan	0	3	3
Caddo	0	5	5
Canadian	0	1	1
Coal	0	5	5
Carter	5	6	11
Cleveland	1	1	2
Comanche	0	2	2
Cotton	0	1	1
Creek	5	24	29
Garfield	1	5	6
Garvin	1	1	2
Grady	0	2	2
Greer	0	2	2
Grant	0	1	1
Harper	0	1	1
Hughes	1	4	5
Haskell	0	6	6
Jefferson	0	1	1
Kay	2	6	8
Kiowa	0	4	4
Lincoln	2	7	9
Latimer	0	2	2
Logan	0	3	3
McIntosh	0	2	2
Marshall	0	5	5
Muskogee	2	14	16
Noble	2	8	10
Okfuskee	1	9	10
Oklahoma	26	82	108
Okmulgee	2	13	15
Osage	4	10	14
Pawnee	2	9	11
Payne	0	2	2
Pittsburg	5	4	9
Pontotoc	0	3	3
Pottawatomie	4	4	8
Roger Mills	0	2	2
Seminole	6	9	15
Stephens	1	4	5
Tulsa	3	9	12
Washita	0	2	2
Wagoner	3	6	9
Total April	80	300	380
Total March	84	341	425
Difference	4	41	45

WELLS COMPLETED

BRYAN COUNTY

14-6s-7 Ussery, W. A. Johnson 1..... dry

CARTER COUNTY

16-1s-3w McCrory, Magnolia Pet. Co. 1 dry
32-4s-2 Anderson, Tex Okla. Drlg. Co. 1 ..... dry
12-1s-3w Hooks, Amos Drlg. Co. 2 ..1450
19-1s-2w Robb, Carter Oil Co. 1.....*1240
24-1s-3w Eaves, The Texas Co. 6.... 300
4-2s-11w Forney, Gilbert & Lowery 1 dry

Wells completed 6
Production 2990
Dry 3

*Twenty hours.

CLEVELAND COUNTY

6-10-2w Sudik, Continental Oil Co. 5.. *75

*Four hours.

CHEROKEE COUNTY

8-14-21 Benge, Weaver & Proctor 1.. dry

COMANCHE COUNTY

8-3-10w Kline, Max Pray 1 ..... dry

CREEK COUNTY

18-19- 9 Coonrod, C. Mechling et al 1 dry
21-19- 9 Bucker, E. L. Robinson 2.... 50
29-19- 9 Hamilton, Gled Oil Co. et al 1 440
4-17-11 Harry, Krasne Drlg. Co. 2... 4
32-17-12 Wilson, Murta, Sherry and Carter Oil Co. 3 ..... gas
15-19- 7 Green, R. E. Freeman 1..... 75
Wofford, McCulloch et al 1.. 25
18-19- 9 Weaver, A. A. Bailey & Johnson 4 120
14-17-10 Baker, J. E. Wallace et al 1-A dry
17-19- 9 Cordell, Johnson Oil & Ref. Co. 1 ..... gas
32-19- 9 Chatham, Westfall Drlg. Co. 1 dry
Morrison, Holmes Oil Co. 1 dry
12-18- 8 Fee, Sidwell Drlg. Co. 1..... gas
32-17-12 Stewart, Wilrough Oil Co. 1-A gas
12-19- 8 Travia, Gled Oil Co. 2..... 115
23-17-10 McKellop, J. H. Wright estate 1-A ..... dry
32-17-12 Wilson, Murta et al 1..... 240
1-19-10 Grayson, Troutt et al 2..... dry
17-17- 8 Thompson, R. F. Moore et al 1 gas
29-17-10 Hodge, Emarthia Oil Co. 1.. dry
17-17-11 Wacoche, J. M. Scott et al 1-A dry
36-15- 7 Bigpond, Olean Pet. Co. 3.. 145
26-14-10 Fuel, Atlantic O. P. Co. 1... 235

Wells completed 23
Production 1449
Dry 8
Gas 5
Gas production 13,750,000

GRADY COUNTY

24-4-8w Williams, Badgett & Cooper 1 gas
35-4-8w Childers & Gardner, J. B. Nichols 1 ..... gas

Wells completed 2
Gas 2
Gas production 56,500,000

HASKELL COUNTY

10-9-18 Phillips, Enterprise Gas Co. 1 gas

Gas production 770,000

HUGHES COUNTY

16-7-8 Hayes, Magnolia Pet. Co. 2.... gas
9-7-8 Narcome, Jarvis & Holm 1.... 435
17-7-8 Brown, Minnehoma Oil Co. 2.. gas

Wells completed 3
Production 435
Gas 2
Gas production 56,000,000

JEFFERSON COUNTY

18-4s-8w McClarty, W. H. Smith 1.... dry

LATIMER COUNTY

4-6-18 Weaver, Choctaw Gas Co. 1.... dry

LINCOLN COUNTY

12-15-6 Wolfe, H. D. Truex et al 1... gas

Gas production 21,000,000

LOVE COUNTY

26-6s-2 Autry, Batson, Starrett and Autry 1 ..... dry

MARSHALL COUNTY

24-5s-5 Null, Poor Boy Oil Co. 2..... dry
30-5s-6 Coatsworth, Magnolia Pet. Co. 2 dry
2-6s-6 Sparlin, W. E. Summers et al 1 dry

Wells completed 3
Dry 3

MUSKOGEE COUNTY

9-15-18 Fields, Western Drlg. & Equipment Co. 4 ..... dry
17-13-16 London, G. D. Robinson 1... gas
34-16-15 Peterson, Mack Drlg. Co. 1.. gas
19-14-19 Hardishell, M. E. Johnson 2 dry
9-15-18 Ingram, Mazda Oil Co. 1..... 35
14-15-15 Smith, C. W. Brown 1-A.... gas
8-15-18 Spaulding, H. L. Jolly 2..... gas
17-13-16 Jackson, Braman Oil Co. 3.. 5
17-13-16 Jackson, Braman Oil Co. 4.. gas

Wells completed 9
Production 40
Dry 2
Gas 5
Gas production 9,640,360

OKLAHOMA COUNTY

2-11-3w Stout, California Operating Co. 1 6,655
3-11-3w Mosey, Phillips Pet. Co. 1 *5,483
10-11-3w Robb, Phillips Pet. Co. 1.. *2,550
11-11-3w Ferndale Community, I.T.I.O. Co. et al 6..... †309
10-11-3w Schilling, Phillips Pet. Co. 1 ..... *7,034
Temple, Phillips Pet. Co. 1 *8,405
Wilson, Westgate Oil Co. 1 *5,082
22-11-3w Earp, I.T.I.O. Co. et al 1.. †1,776
2-11-3w Seal, Champlin O. & R. Co. 1 ..... *269
Reno, Russell Pet. Co. 1.. 49,496
Foote-Briscoe, T. B. Slick estate 3 ..... *68
3-11-3w Payne Community, Anderson & Prichard et al 1.. *4,618
Johnson, Phillips Pet. Co. 1 ..... *4,923
10-11-3w Hile, Dengail Oil Co. 1.... *7,909
View Point, I.T.I.O. Co. et al 3 ..... †20,503
Frost Heights, T. B. Slick estate 3 ..... §541
Wright, H. F. Wilcox O. & G. Co. et al 1..... †3,712
25-11-3w Clauer, Coline Oil Co. 16.. 2,196
1-11-3w Townsend, T. B. Slick estate et al 2 ..... dry
2-11-3w Hathaway, Olis, Inc. 1... *9,197
10-11-3w Wilhoit Community, Anderson & Prichard et al 1 ..... *5,699
Kleinegger, Phillips Pet. Co. 1 13,443
26-11-3w Billen, I.T.I.O. Co. and Cromwell-Franklin Oil Co. 1 ..... †1,677
1-11-3w Gustine, Empire O. & R. Co. 1 ..... *289
2-11-3w Seal, Champlin O. & R. Co. 2 ..... *272
3-11-3w Aungust, Mid-Texas Oil Co. 1 ..... †17,101
Forrester, Phillips Pet. Co. 1 ..... *7,100
Othenin, Phillips Pet. Co. 1 ..... †16,344
14-11-3w Pasadena Heights, I.T.I.O. Co. et al 5..... *156

Wells completed 29
Production 203,205
Dry 1

*Four hours. †Eight hours. ‡Thirteen hours. §Twenty-one hours.

OKFUSKEE COUNTY

9-12-11 Alexander, J. L. Selby 5..... dry
28-12-10 Johnson, McMan & Seekell 1 dry
13-11-10 Holmes, Foster Dev. Co. 1.. dry

Wells completed 3
Dry 3

OKMULGEE COUNTY

35-16-11 Farr, C. D. Klingensmith 3.. 45
12-15-12 Replogle, J. H. Rebold Oil Co. 1 ..... dry
32-15-13 Kemyanny, Miller et al 1..... gas
5-14-14 M. Wofford, Denton & Marshall 1 ..... dry
35-16-11 Meyers, The Texas Co. 1..... 35
28-12-14 M. Anderson, Jordan et al 1.. gas

Wells completed 6
Production 80
Dry 2
Gas 2
Gas production 6,400,000

OSAGE COUNTY

4-28- 7 L. G. Stanley et al 1..... dry
22-24- 7 Kay County Gas Co. 9-B.... gas
14-24- 8 Gault Brown Oil Co. 1..... 10
30-22- 9 E. O. Platter 6..... 10
33-22-11 C. O. Buckles 2..... dry
4-26-10 Oklahoma Power & Water Co. 130 ..... dry
3-20-12 Oklahoma Natural Gas Corp. 1 ..... dry

Wells completed 7
Production 20
Dry 4
Gas 1
Gas production 500,000

PAWNEE COUNTY

1-20-7 Needham, Brewer et al 1-A.... dry

PONTOTOC COUNTY

29-5-8 Harrell, Edna Mariee Oil Co. 1 dry
7-4-8 Gilcrease, Madison Pet. Corp. 1 dry
3-4-7 Wade, Smith & Lee 4..... dry
12-4-7 Brown, Clark & Cowden 2..... gas

Wells completed 4
Dry 3
Gas 1
Gas production 2,000,000

POTTAWATOMIE COUNTY

14-6-3 Archer, Mid-Continent Pet. Corp. 2 1340
22-6-3 Miller, J. E. Crosbie and Mid-Kansas O. & G. Co. 1..... 122
Townsend, J. A. Hull 3..... 745
Bullock, Payne et al 6..... 1123

Wells completed 4
Production 3330

PAYNE COUNTY

33-19-5 Curley Chief, Wood Oil Co. 1..*150
4-18-5 Little Chief, Deep Rock Oil Corp. 1 140
10-18-5 Jennings, Magnolia Pet. Co. 2 dry

Wells completed 3
Production 290
Dry 1

*Fifteen hours.

PITTSBURG COUNTY

9-7-18 Carney, Central States Light & Power Co. 1 ..... gas
Cotcher, Utilities Prod. Co. 1... gas
7-6-15 Ringland, Peerless Oil Co. et al 1 ..... dry
6-6-14 Campbell, Red Bank Oil Co. 1-A dry

Wells completed 4
Dry 2
Gas 2
Gas production 22,500,000

SEMINOLE COUNTY

29-6-6 Deavers, Droppleman et al 1-A 675
2-8-5 Coker, Carter Oil Co. 8..... 980
Hyde, Prairie O. & G. Co. and T. B. Slick estate 5..... 35
Coker, Gypsy Oil Co. 1..... 927
Rogers, Carter Oil Co. 5..... 583
25-8-7 Tommy, Mid-Continent Pet. Corp. 1 ..... dry
29-6-6 Hyde-Swan, Magnolia Pet. Co. 2 dry
2-8-5 Hyde, Prairie O. & G. Co. and T. B. Slick estate 4..... 700
30-8-8 Davis, Mid-Kansas O. & G. Co. and Ramsey 5 925
29-6-6 Wood, Magnolia Pet. Co. 2..... 803
26-5-7 Reed, Magnolia Pet. Co. 2..... gas

Wells completed 11
Production 5628
Dry 2
Gas 1
Gas production 30,000,000

STEPHENS COUNTY

23-1s-7w Skelton, Taylor & Overmyer 1 dry

TEXAS COUNTY

36-5-14ecm Kenny, Argus Prod. Co. 1 gas

Gas production 5,000,000

TULSA COUNTY

28-19-14 McIntosh, Murphy et al 1-A dry
33-18-14 Halkey, Owens et al 4..... 20
4-17-14 Perryman, Preston et al 3... 4
24-16-13 Wolfe, McDonald et al 1..... 32
20-19-14 Shields, Chandler & Day 1-A gas
2-18-14 Costello, L. L. Boyd 1..... dry
33-18-14 Halkey, Ohio Pet. Co. 3..... 190
32-19-11 McKay, Galt-Brown Oil Co. 1-A ..... dry

Wells completed 8
Production 246
Dry 3
Gas 1
Gas production 3,500,000

WAGONER COUNTY

34-17-15 Chissoe, E. C. Peebles et al 1 dry
19-17-17 M. Gregory, Wm. La Pierre 1 gas

Wells completed 2
Dry 1
Gas 1
Gas production 6,340,830

KANSAS FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Butler	2	50	0	1
Cowley	3	675	1	0
Elk	1	135	0	0
Ellsworth	1	117	0	0
Greenwood	1	0	1	0
Lyon	1	0	1	0
McPherson	10	5,150	1	4
Morris	1	0	1	0
Morton	1	0	0	1
Rice	1	226	0	0
Russell	1	0	1	0
Sedgwick	2	910	0	0
Stevens	5	0	0	5
Total April	33	7,353	7	11
Total March	48	10,313	15	12
Difference	15	2,959	8	1

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Barton	0	3	3
Bourbon	0	1	1
Butler	1	3	4
Clay	0	1	1
Coffey	0	3	3
Cowley	1	10	11
Dickinson	0	1	1
Elk	0	1	1
Ellsworth	0	4	4
Ford	0	3	3
Franklin	0	1	1
Geary	0	1	1
Greenwood	3	12	15
Graham	0	1	1
Harper	0	1	1
Harvey	0	3	3
Lyon	1	0	1
McPherson	15	37	52
Marion	0	3	3
Morris	2	2	4
Morton	0	1	1
Ness	0	1	1
Osage	0	1	1
Rawlins	0	1	1
Reno	1	4	5
Rice	3	6	9
Rooks	0	2	2
Rush	0	1	1
Russell	1	4	5
Saline	0	2	2
Sedgwick	1	3	4
Sheridan	0	1	1

Stafford	0	1	1
Stevens	1	4	5
Sumner	2	1	3
Trego	0	1	1
Washington	0	1	1
Woodson	1	1	2
Total April	31	132	163
Total March	25	137	162
Difference	6	5	1

WELLS COMPLETED

BUTLER COUNTY

21-26-5 Koogler, Magnolia Pet. Co. 65. 50
24-27-4 Holliday, Blaksley & Wentz 2 gas

Wells completed 3
Production 50
Gas 1
Gas production 3,750,000

COWLEY COUNTY

12-32-4 Smiley, Roth & Faurot 1 250
12-32-4 Holt, Roth & Faurot 4 425
32-22-4 Boyd, Tom Fine et al 1 ..... dry

Wells completed 3
Production 675
Dry 1

ELK COUNTY

23-30-8 Ferguson, Ferguson et al 1.... 135

ELLSWORTH COUNTY

1-17-10w Stratman, J. A. Aylward et al 1 .....*117

*One hour's production.

GREENWOOD COUNTY

27-23-11 Wineger, Simmons et al 4 80
34-22-11 Hess, Smith et al 1 10
7-24-11 Smith, Polhamus et al 1.... dry
13-23-12 Souder, Braden et al 1 ..... dry

Wells completed 4
Production 90
Dry 2

LYON COUNTY

8-19-10 King, Griffith et al 1 ..... dry

McPHERSON COUNTY

12-19-2w Ostlind, McPherson O. & G. Dev. Co. and Shell Pet. 1.. gas
6-20-1w Domsch, Derby Pet. Co. and Empire O. & R. Co. 1 ....*925
22-19-2w Dielman, Twin Drlg. Co. et al 1 ..... dry
26-19-2w Williams, Dickey Oil Co., Shell Pet. 1 ..... *180
26-19-2w Johnson, Shell Pet. Corp. et al 1 ..... *1113
11-19-2w Decker, McPherson O. & G. Dev. Co. et al 1 ..... gas
12-19-2w Gustafson, W. C. McBride, Inc. 1 ..... *512
31-19-1w Sellers, Lario Oil Co. and Shell Pet. 1 ..... gas
23-19-2w Finkle, W. C. McBride, Inc. 1 gas
7-20-1w Winn, Palmer and Phillips Pet. and Shell Pet. 1 ....*2420

Wells completed 10
Production 5150
Dry 1
Gas 4
Gas production 114,259,000

*Twelve hours' production.

MORRIS COUNTY

16-16-7 Jentis, Loomis et al 1 ..... dry

MORTON COUNTY

9-34-39w Ferguson, Sidewell & Kihns 1 gas

Gas production 10,500,000

RICE COUNTY

3-21-6w Rice, Twin Drlg. Co. and Phillips Pet. Co. 1 .....*226

*Nine hours' production.

RUSSELL COUNTY

27-15-13w Berry, Signal Oil Co. and Mid-Kansas O. & G. 1 .... dry

SEDGWICK COUNTY

19-27-2 Horne, Eisenhour et al 1 910
Wheeler, Magnolia Pet. Co. 4 . 700

Wells completed 2
Production 910

STEVENS COUNTY

27-34-39w Meyer, Trees Oil Co. 1 .... gas
32-32-39w H. Rinehart, Texas Interstate Pipe Line Co. et al 1 .... gas
3-34-38w Shirley, Texas Interstate Pipe Line Co. et al 1.... gas
18-34-38w Kelly, Texas Interstate Pipe Line Co. et al 1 ..... gas
1-34-38w Phillips, Texas Interstate Pipe Line Co. et al 1.... gas

Wells completed 5
Gas 5
Gas production 43,500,000

EAST TEXAS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Bowie	0	0	0	1	4		5
Cass	2	0	2	0	2	6	8
Harrison	4	0	4	0	2	3	5
Marion	4	0	4	0	2	3	5
Panola	2	0	1	1	3	7	10
Red River	0	0	0	0	0	2	2
Shelby	0	0	0	0	2	6	8
Ttl. Apr.	12	0	11	1	12	31	43
Ttl. Mar.	2	0	2	0	15	28	43
Difference	10	0	9	1	3	3	0

*Gas production: Panola County 21,300,000 feet.

WELLS COMPLETED

CASS COUNTY

John L. Chambers Sur., Felkner, J. D. Hunter 1 ..... dry
J. A. Ferrell Sur., Bell, J. E. Smitherman 1 ..... dry

HARRISON COUNTY

S. F. Sparks Sur., Bohler, Corona Pet. Co. 1 ..... dry
Henry Vardeman Sur., Taylor, W. M. Hobson, trustee 1 ..... dry
D. Davis Sur., Hall, W. G. Ray Drlg. Co. 1 ..... dry
E. A. Marchent Sur., Pitts, Rowe-Nichols 1 (loc.) ..... abd
John B. Morton Sur., Davenport, Sinclair Oil & Gas Co. 1 ..... dry

Wells completed 4
Dry 4

MARION COUNTY

S. R. Hazelwood Sur., DeWare estate, Eden Oil Co. 1 ..... dry
Wm. Mason Sur., Johnson, Shasta Oil Co. 1 ..... dry
Jacob Grover Sur., Wright, Sinclair Oil & Gas Co. 1 ..... dry
W. Russell Sur., Coulter, Sinclair Oil & Gas Co. 1 ..... dry

Wells completed 4
Dry 4

PANOLA COUNTY

Jordan Sur., Werner, La.-Ark. Pipe Line Co. 13 ..... gas
Chas. Haley Sur., Dunham. Knox et al 1 dry

Gas production 21,300,000

EAST CENTRAL TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Abd.	Gas	Rgs.	Drlg.	Ttl.
Cherokee	1	0	1	0	2	3	5
Delta	1	0	1	0	0	1	1
Ellis	1	0	1	0	0	0	0
Gregg	40	270,420	14	0	12	36	48
Henderson	1	0	1	0	0	0	0
Lamar	0	0	0	0	1	1	2
Limestone	1	0	1	0	0	1	1
Nacogdoches	0	0	0	0	1	3	4
Red River	0	0	0	0	2	0	2
Rusk	176	1,034,451	5	0	21	98	119
Smith	1	15,000	0	0	4	5	9
Upshur	3	0	3	0	1	2	3
Van Zandt	17	62,017	2	4	0	6	6
Ttl. Apr.	242	1,381,888	29	4	44	156	200
Ttl. Mar.	91	262,421	23	1	34	158	192
Difference	151	1,119,467	6	3	10	2	8

WELLS COMPLETED

CHEROKEE COUNTY

Thompson, Moore & Baker 1 ..... abd

DELTA COUNTY

Sansiry, Everett Drlg. Co. 1 ..... abd

ELLIS COUNTY

Surf, Foster & Richardson 1 ..... abd

GREGG COUNTY

J. R. Castleberry, Alco Royalty Co. 1.. abd
F. K. Lathrop, Arkansas Fuel Oil Co. 1-B 4800
F. K. Lathrop, Arkansas Fuel Oil Co. 2-A 7200
F. K. Lathrop, Arkansas Fuel Oil Co. 3-A 7500
F. K. Lathrop, Arkansas Fuel Oil Co. 1-C 10,000
Harrison, Arkansas Fuel Oil Co. 1 18,000
Brightwell, H. L. Blackstock 2 6000
E. Thompson, British American Co. 1.. 3000
Elder, D. H. Byrd-Gulf Prod. Co. 1... abd
Richards, W. L. Brandon-Geo. McCamey 1 ..... abd
L. C. Dudley, Daniels & Patton 1 ..... abd
Andrews, Harry W. Elliott et al 1 12,000
Church, E. A. Eslick et al 12,000
Rodden, Foster and East Texas Ref. Co. 2 7500
Hamby, Mamie Hammond et al 1 ..... abd
Smith, Hickman et al 1 ..... abd
McAbee, T. D. Humphrey et al 1 ..... abd
J. B. Watson, Hunter-Rowe et al 1..15,000
Page, Hurlbut & Brown 1 ..... abd
B. Rodden, Magnolia Pet. Co. 2 12,000
B. Rodden, Magnolia Pet. Co. 3 12,000
B. Rodden, Magnolia Pet. Co. 4 15,000
Art Mitchell ,Marine Oil Co. 1 7200
Smith, Meren et al 1 ..... abd
McGrede, Pilot Oil Co. 1 8000
Smith, Ray Drlg. Co. 1 ..... abd
Snodden, Skipper Oil Co. 1 12,000
Magrill, Skipper Oil Co. 1 15,000
B. Rodden, Roeser-Pendleton 2 7500
Johnson, Oriental Oil Co. 1 6720
Snavely, Selby Oil & Gas Co. 1 20,000
Davis, Shell Pet. Corp. 1 7200
Tenery, Simms Oil Co. and Stanolind Oil Co. 1 12,000
A. J. Rodden, R. C. Showalter 1 ..... abd
Spangler, Sultan Oil Co. 1 15,000
F. K. Lathrop, Tidal Oil Co. 1 3000
A. A. Castleberry, Tidal Oil Co. 1 ..... abd
Morton, J. R. Travis et al 1 ..... abd
Lamb, Ben Youngblood, trustee 1 ..... abd
McKinley, Yount Lee Oil Co. 1 15,000

Wells completed 40
Production 270,420
Abandoned 14

HENDERSON COUNTY

Taylor, W. M. Hobson, trustee 1 ..... abd

LIMESTONE COUNTY

B. B. Barron, Imperator Oil Co. 1 .... abd

RUSK COUNTY

Jobe, G. S. Anderson et al 1 4800
Jobe, G. S. Anderson et al 2 2600
Thompson, Anderson & Co. 1 7680
Wm. Camp, Babcock Bros. 1 ..... abd
Brightwell, H. L. Blackstock 1 10,500
Brightwell, H. L. Blackstock 2 6000
Bradford, Ball & Malone 2 3000
Florey, Burton Drlg. Co. 1 1000
Thompson, Burton Drlg. Co. 1 7500
Brown, Nick Barbare 1 1900
Elder, Byrd et al ..... abd
Mayfield-Alford, Roy I. Carter 2 1950
Mercer, Clark & Cowdens 1 ..... abd
Giles, Roy I. Carter 1 1440
Thrash, Roy I. Carter 1 3000
Camp, Consolidated Oil Co. 1-A 2400
Jobe, Consolidated Oil Co. 2 1250
Jobe, Consolidated Oil Co. 5 1200
Jobe, Consolidated Oil Co. 6 2000
Camp, Consolidated Oil Co. 2 1200
Camp, Consolidated Oil Co. 4 650
Camp, Consolidated Oil Co. 3-A 1100
Christian, Cordova Union Oil Corp. 3 ..7500
Peterson, Cox & Hamon 1 5200
Geo. Thompson, Cranfill-Reynolds Co. 1.3600
C. Young, Cranfill-Reynolds Co. 1 3300
C. Young, Cranfill-Reynolds Co. 1-B ..2500
King-Blackburn, Cranfill-Reynolds Co. 1 15,000
C. Young, Dave & Bill Oil Co. 1 2000
Bridwell, Demontrand et al 1 14,000
Motley, Devonian Oil Co. and Gulf Prod. Co. 1 14,400
Peterson, W. H. Dunning and J. H. Markham 1 15,000
Peterson, W. H. Dunning and J. H. Markham 2 15,000
Morse, East Texas Loan & Dev. Co. 1..8000
Giles, East Texas Ref. Co. 1 3400
Giles, East Texas Ref. Co. 2 4500
W. M. Camp, Elzey Drlg. Co. 1 500
Ben Laird, Federated Oil Co. 2 5320
Camp, Federated Oil Co. 1 3000
Camp, Federated Oil Co. 2 3600
Mayfield-Alford, Federated Oil Co. 2 ..1200
Ashby, Foster and Deep Rock Oil Co. 2.1000
Ashby, Foster and Deep Rock Oil Co. 3.1600
Mayfield-Alford, Foster and Deep Rock Oil Co. 2 425
Mayfield-Alford, Foster, Kolp & Jeffries 2 1200
Mayfield-Alford, Foster, Little et al 1..1000
Camp, Foster and Wainwright Oils, Ltd. 2 1120
Bradford, Gilcrease Oil Co. 1 3000
Bradford, Gilcrease Oil Co. 2 6500
Griffin, Gulf Prod. Co. 1 40,000
Griffin, Gulf Prod. Co. 2 3600
Brightwell, Gulf Prod. Co. 1 3200
Birdsong, Gulf Prod. Co. 1 20,000
Brown, Haynes Drlg. Co. 3 3000
Brown, Haynes Drlg. Co. 4 1000
Thrash, Hefflin & Fox 1 1900
Thrash, Hefflin & Fox 2 1450
Bean, Heep Oil Co. 1 5800
Barber, Heep Oil Co. 1 12,500
Peterson, Hicks et al 1 19,000
W. R. Crim, Houston Oil Co. 1 12,000
L. D. Crim, Houston Oil Co. 1 2500
L. D. Crim, Houston Oil Co. 2 2780
S. S. Laird, Houston Oil Co. 1 12,000
L. D. Crim, Humble Oil & Ref. Co. 6..9000
L. D. Crim, Humble Oil & Ref. Co. 8..10,000
L. D. Crim, Humble Oil & Ref. Co. 7..5000
L. D. Crim, Humble Oil & Ref. Co. 9.14,500
L. D. Crim, Humble Oil & Ref. Co. 10.10,000
L. D. Crim, Humble Oil & Ref. Co. 11.11,500
L. D. Crim, Humble Oil & Ref. Co. 12..7500
Peterson, Humble Oil & Ref. Co. 2 ..20,000
Peterson, Humble Oil & Ref. Co. 4 ..15,000
Peterson, Humble Oil & Ref. Co. 5 6000
S. S. Laird, Humble Oil & Ref. Co. 2..12,000
S. S. Laird, Humble Oil & Ref. Co. 1-A 10,000
Ben F. Laird, Humble Oil & Ref. Co. 2 10,000
J. M. Crim, Humble Oil & Ref. Co. 1-B.5500
Kangerga, Humble Oil & Ref. Co. 2..2760
Ashby, H. L. Hunt et al 5 400
Finney, H. L. Hunt et al 1 1720
Young, Hunt et al 1 3000
Young, Hunt et al 3 11,400
Peterson-Laird, R. A. Irwin et al 1 ..11,200
Ras Pool, Ben Johnson et al 1 3000
Brooks, C. M. Joiner 1 3000
Brooks, C. M. Joiner 2 3000
Bradford, C. M. Joiner 2-B 1500
Bradford, C. M. Joiner 3-B 1000
Crim, Ed. M. Jones-Houston Oil Co. 2.12,000
Crim, Ed. M. Jones-Houston Oil Co. 2-B.7500
Peterson, E. M. Jones-Houston Oil Co. 1-A 15,000
Peterson, E. M. Jones-Houston Oil Co. 1 10,000
Thrash, Jones Drlg. Co. 1 2500
Taliaferro, K. & M. Oil Co. 1 2000
J. N. Peterson, Karona Oil Co. 2 10,000
Alford, Leonard Pet. Co. 1 1500
Adams, Leonard Pet. Co. 1 ..... abd
D. M. Peterson, Lewis Prod. Co. 1 15,000
Young, Lide-Rowe Oil Co. 1 4000
Young, Lide-Taylor Oil Co. 2 2975
Kennedy, Louisiana-Texas Oil Corp. 1..6590
Thompson, McMillan et al 1 12,000
Florey, Magnolia Pet. Co. 1 4,800
Della Crim, Magnolia Pet. Co. 3-A .. 12,000
Della Crim, Magnolia Pet. Co. 5 16,600
Della Crim, Magnolia Pet. Co. 6 15,500
Della Crim, Magnolia Pet. Co. 7 17,000
Ben Laird, Magnolia Pet. Co. 1 20,000
Ben Laird, Magnolia Pet. Co. 2 18,450
W. R. Crim, Magnolia Pet. Co. 3 12,480
W. R. Crim, Magnolia Pet. Co. 4 16,800
W. R. Crim, Magnolia Pet. Co. 5 16,800
J. N. Peterson, Markham & Dunning 1 15,360
J. N. Peterson, Markham & Dunning 2 17,040
Nat Bean, Marine Oil Co. 1 12,000
Nat Bean, Marine Oil Co. 2 9,900
Thrash, Merrick et al 2 2,500
Mayfield-Alford, Moss & Urshell 1 .. 70
Thrash, John Mabee 1 2,250
Thrash, John Mabee 2 3,000
Moore, Mid-Kansas Oil & Gas Co. 1.. 3,000
Brightwell, Navarro Oil Co. 1 1,950
W. R. Crim, John W. Olvey 2 11,280
Brown, Olsen Bros. 2 2,500
Brown, Olsen Bros. 4 3,250
Thrash, Perry et al 1 4,660
Thrash, Perry et al 2 4,600
Eaton, Pearl Oil Co. 1 4,400
Deason, Petroleum Marketing Co. 1.. 2,875
Frederick, Petroleum Marketing Co. 1 1,200
Arnold, Petroleum Marketing Co. 1 .. abd
Finney, Pilot Oil Co. 3 2,050
Thrash, Pioneer Oil Co. 1 2,500
Thrash, Pioneer Oil Co. 2 2,600
Thrash, Pioneer Oil Co. 5 2,400
Taliaferro, Pioneer Oil Co. 1 5,000
Carlton School, Robert Oil Co. 1 7,300
Ras Pool, Shasta Oil Co. 1 3,700
Ashby, Bert Shaw Oil Co. 3 2,400
Deason, Bert Shaw Oil Co. 1 625
Bradford, Sinclair Oil & Gas Co. 1 .. 1,000
Bradford, Sinclair Oil & Gas Co. 2 .. 800
Holland, Sinclair Oil & Gas Co. 4 ... 1,250
Holland, Sinclair Oil & Gas Co. 5 ... 2,500
Holland, Sinclair Oil & Gas Co. 6 ... 1,000
Holland, Sinclair Oil & Gas Co. 7 ... 450
Holland, Sinclair Oil & Gas Co. 8 ... 1,100
Holland, Sinclair Oil & Gas Co. 9 ... 1,290
Cox, Snetcher & Pittman 1 8,860
E. N. Peterson, H. R. Smith-Houston Oil Co. 2 7,430
Peterson, Smith and Gulf Prod. Co. 1 12,250
Ray Laird, Snowden & McSweeney 1. 20,000
Giles, Southern Oil Co. 1 1,000
Ben Laird, Stanolind Oil & Gas Co. 1 6,500
Ben Laird, Stanolind Oil & Gas Co. 2 9,000
Finney, Tidal Oil Co. 1 2,300
Holland, Tidal Oil Co. 2 2,270
Toliver, Tidal Oil Co.-Wm. Johnson 2 1,975
Deason, Turman Oil Co. 1 2,700
Deason, Turman Oil Co. 2 3,200
Deason, Turman Oil Co. 3 2,410
Calvin Young, Turman Oil Co. 1 3,500
Brightwell, C. E. Upchurch 1 8,500
Brightwell, C. E. Upchurch et al 2 .. 10,500
Young, Graddy H. Vaughn 1 4,500
D. M. Peterson, Westheimer et al 1.. 12,500
Bradford, Witherspoon Oil Co. 1 3,500
Ladd, Woodley Pet. Co. 1 13,600
Dave Ladd, Woodley Pet. Co. 1 11,850
D. M. Peterson, Woodley Pet. Co. 1.. 12,000
Thrash, Ward Oil Co. 1 650
Thrash, Ward Oil Co.-Elliott and Johnston 1 21,000
Giles, Ward Oil Co. 1 2,000
Giles, Ward Oil Co. 2 3,500
Talley, West Texas Oil & Roy. Co. 1 816

Wells completed 176
Production 1,034,451
Abandoned 5

SMITH COUNTY

S. S. Cook, Guy V. Lewis et al 1 .. 15,000

UPSHUR COUNTY

Cobb, DeArmand et al 1 ..... Abd
Fluellen, DeArmand et al 1 ..... abd
Minton, McGinley et al 1 ..... abd

Wells completed 3
Production 0
Abandoned 3

VAN ZANDT COUNTY

Sanger, George Anderson and E. E. Fogelson 2 5,000
Blake, Humble O. & R. Co. 11 6,000
Crim, Pure Oil Co. 2 ..... abd
R. E. Cade, Pure Oil Co. 3 2,500
Bracken, Pure Oil Co. 3 6,500
Brawner, Pure Oil Co. 2 ..... abd
H. C. Gilbert, Pure Oil Co. 2 5,000
A. F. Magers, Pure Oil Co. 2 ..... gas
Jarman, Pure Oil Co. 6 ..... gas
Jarman, Pure Oil Co. 7 7,500
F. B. Smith, Pure Oil Co. 5 6,000
J. T. Thompson, Pure Oil Co. 10 5,000
A. R. Tunnell, Pure Oil Co. 6 7,500
A. G. Tunnell, Pure Oil Co. 2 ..... gas
Ella York, Pure Oil Co. 4 6,000
Ella York, Pure Oil Co. 5 5,000
Swain, Pure Oil Co. 2 ..... gas

Wells completed 17
Production 62,017
Abandoned 2
Gas 4

NORTH CENTRAL TEXAS

Summary of Wells Completed

	Comp.	Prod.	Dry	Gas
Archer	7	20	6	0
Baylor	2	0	2	0
Brown	3	3	1	1
Callahan	3	0	2	1
Coleman	10	1,396	2	1
Clay	1	0	1	0
Cooke	3	45	1	0
Denton	1	0	1	0
Eastland	3	0	2	1
Foard	3	0	2	1
Grayson	1	0	1	0
Haskell	1	0	1	0
Hamilton	1	0	1	0
Palo Pinto	5	0	2	3
Shackelford	1	0	1	0
Stephens	1	0	1	0
Throckmorton	1	0	1	0
Wichita	6	25	5	0
Wilbarger	3	0	3	0
Young	37	670	32	0
Total April	93	2,159	68	8
Total March	126	3,771	88	3
Difference	33	1,612	20	5

Rigs and Wells Drilling

	Rigs	S.D.	Drlg.	Ttl.
Archer	5	11	9	25
Brown	0	5	2	7
Callahan	0	3	2	5
Coleman	4	7	13	24
Cooke	2	4	3	9
Clay	0	2	0	2
Eastland	0	3	5	8
Erath	1	2	0	3
Jack	0	1	3	4
Palo Pinto	0	4	8	12
Shackelford	0	0	1	1
Stephens	0	1	3	4
Throckmorton	0	1	4	5
Wichita	3	4	7	14
Wilbarger	0	1	4	5
Young	3	13	18	34
Miscellaneous counties	2	15	9	39
Total April	20	80	91	191
Total March	32	88	82	202
Difference	13	8	9	11

WELLS COMPLETED

ARCHER COUNTY

Kemp & Kempner-B, Dr. C. W. Wallace 1 ..... dry
Turbeville, Cumley & Son 1 ..... dry
Richardson-B, F. P. Hynes 2 ..... dry
Knight et al, Geo. L. Pace et al 1 .... dry
Richardson, Petroleum P. Co. et al 1.. dry
Kemp & Kempner-C, Dr. C. W. Wallace 1 ..... dry
Webb, Hedrick & Camp 2 30

Completions 7
Production 30
Dry holes 6

BAYLOR COUNTY

J. W. Stevens, Hart et al 1 ..... dry
Porter, Hert Ehorn 1 ..... dry

BROWN COUNTY

Burkett & Newton, Mac T. Anderson 1 gas
J. H. Fry, Pann Pet. Corp. 1 ..... dry
T. B. Starkey, Hammon & Heyser 1 3

Completions 3
Production 3
Dry holes 1
Gas wells 1

CALLAHAN COUNTY

Hayden, Banteman Co. et al 1 ..... dry
E. L. Finley, R. Guffey et al 2 ..... dry
Harris, States Oil Corp. 1 ..... gas

Completions 3
Dry holes 2
Gas wells 1

COLEMAN COUNTY

C. Burkett, Anderson et al 1 150
F. Golson, Arcadia Ref. Co. et al 1 (second completion) 480
F. Golson, Brown & Ekholm 10 105
Wm. Burkett, Neversuch Oil Co. 1 150
Kingsberry, Jamison, Pollard & Forster 2 120
Mrs. Z. Brown et al, Ansac Oil Corp. et al 1 ..... dry
Goodson, Carter et al 1 16
Wm. Burkett, Neversuch Oil Co. 2 375
Barnett, Shields & Arcadia Ref. Co. 1.. dry
Jennings, Bartlett & Dozier 1 ..... gas

Completions 10
Production 1396
Dry holes 2
Gas wells 1

CLAY COUNTY

Evans, R. T. Belcher et al 9 ..... dry

COOKE COUNTY

Truebenbach, Danciger O. & R. Co. 3 .. dry
C. G. Clayton, J. G. Roke 1 40
Riley, Gray-Tex Oil Co. 1 5

Completions 3
Production 45
Dry holes 1

DENTON COUNTY

Wilson, A. W. Walker et al 1 ..... dry

EASTLAND COUNTY

G. W. Herring, Rover Drlg. Co. 1 ..... dry
Sneed, Haslip et al 1 ..... dry
W. H. Groves-Phillips, Lone Star Gas Co. 1 ..... gas

Completions 3
Dry holes 2
Gas wells 1

FOARD COUNTY

Midbrook, G. K. Harris et al 1 ..... dry
Jno. Matus, Humble O. & R. Co. 1 .... gas
Owens, A. W. Phillips et al 1 ..... dry

GRAYSON COUNTY

Conn, F. H. E. Oil Co. 1 ..... dry

HASKELL COUNTY

A. Stone et al, Bridwell Oil Co. 1 ..... dry

HAMILTON COUNTY

A. R. Eidson, J. McCamey et al 1 ..... dry

PALO PINTO COUNTY

Dalton, Dalton et al 1 ..... dry
L. C. Siemmons, Beatty et al 1 ..... dry
E. D. Allen, Indian Royalty Co. 1 ..... gas
W. I. Stephens, Peters et al 1 ..... gas
D. V. Loflin estate, Walker et al 1 .... gas

Completions 5
Dry holes 2
Gas wells 3

SHACKELFORD COUNTY

Mrs. J. Rice, Joe Baldi 1 ..... dry

STEPHENS COUNTY

W. E. Smith, Loftin & Jordan 2 ..... dry

THROCKMORTON COUNTY

Morrison, Swain & Holcomb 1 ..... dry

WICHITA COUNTY

Davis, J. H. Turner 1 ..... dry
American Ref. Properties, T. F. Hunter 5 ..... dry
Waggoner, The Texas Co., 397 35
W. J. Logan et al, Jack H. Martin 1.... dry
Foster & Allen, Tedford Bros. et al 1.. dry
Waggoner, The Texas Co. 398 ..... dry

Completions 6
Production 25
Dry holes 5

WILBARGER COUNTY

Waggoner-F, Easter Oil Co. 1 ..... dry
Burgiss, W. A. Patterson et al 1 ..... dry
Waggoner, L. W. Popp 1 ..... dry

YOUNG COUNTY

S. R. Jeffery, Ard & Panhandle R. Co. 1 ..... dry
Fury Realty Co., Caldwell et al 1 ..... dry
W. G. Leberman, Clover & Ross 1 ..... dry
G. M. Jones, Culbertsom Bros. 1 ..... dry
Stratton, Davis et al 1 ..... dry
J. F. Barnett et al, W. H. Dyer 1 ..... dry
Belknap Coal Co., W. D. Gillette 2 .... dry
L. R. Drum, S. B. Glover 1 ..... dry
S. R. Jeffery, P. F. Gwynn 4 160
W. T. Finch estate, W. F. Hamilton 10. 250
S. R. Jeffery, Lee & Brashear 1 ..... dry
Hunter, McClung & Dawson 1 ..... dry
C. D. Leberman, McDonald & Campbell 1 ..... dry
W. B. Howard, Peckham et al 1 ..... dry
Taack, Putnam Oil Co. and Panhandle 1 ..... dry
C. Baldwin estate, A. H. Stois 2 ..... dry
Mrs. M. W. Sanders, E. F. Taylor et al 1 ..... dry
J. R. Jeffery-B, The Texas Co. and McKanna 5 215
E. A. Jennings, The Texas Co. and Petroleum Co. 1 ..... dry
G. W. Terrell estate (Sec. 249), R. J. Watson et al 1 ..... dry
F. L. Miles, J. F. West et al 1 ..... dry
E. C. Keith, Wichita Prod. Co. 1 10
Belknap Coal Co., Willis & Terrell 1 .. dry
Brashears, D. Knox et al 1 ..... dry
Belknap Coal Co., Ard & Rathke Oil Co. 1 ..... dry
Beckman, F. A. Gorrie et al 1 ..... dry
A. C. Casey, Hynes et al 1 ..... dry
J. T. Lowe, Stacy Jenkins 1 ..... dry
W. Dollins, Oil News Publ. Co. 1 ..... dry
T. J. Routon, Primrose Ref. Co. 1 .... dry
J. H. Choat, Putnam Oil Co. and Panhandle Ref. Co. 1 ..... dry
B. Hawkins, Sam Simmons 1 ..... dry
Wm. Humphrey, O. L. Swanson 1 ..... dry
H. W. Drum, The Texas Co. 1 ..... dry
A. C. Watson, R. G. Watson et al 2 ..... dry
V. Howard, D. L. Wolff 1 ..... dry
J. H. McLaren et al, Christie Bros. 1.. 35

Completions 37
Production 670
Dry holes 32

PANHANDLE FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Carson	2	0	1	1
Cochran	1	0	1	0
Gray	10	5,548	1	1
Hall	1	0	1	0
Hutchinson	6	384	0	3
Moore	2	57	0	1
Wheeler	1	0	0	1
Total April	23	5,989	4	7
Total March	28	897	12	10
Difference	5	5,092	8	3

Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl.
Carson	3	3	8	14
Gray	5	8	10	23
Hutchinson	2	6	4	12
Moore	3	1	4	8
Wheeler	2	1	0	3
Miscellaneous counties ..	1	4	2	7
Total April	16	23	28	67
Total March	17	22	43	82
Difference	1	1	15	15

WELLS COMPLETED

CARSON COUNTY

Percival, Stanolind O. & G. Co. 3..... dry
S. B. Burnett (Sec. 86), Texas Interstate P. L. Co. 1 ..... gas

Completions 2
Dry holes 1
Gas wells 1

COCHRAN COUNTY

Slaughter-B, Continental Oil Co. 1 .... dry

GRAY COUNTY

J. S. Morse-D, Kewanee O. & G. Co. 1.. 150
J. S. Morse-E, Kewanee O. & G. Co. 1.. 325
Smith, Kewanee O. & G. Co. 3 420
Latham, Magnolia Pet. Co. 4 3945
Cobb, Scott 1 ..... gas
Hill, Andrus et al 1 ..... dry
Webb, The Texas Co. 1 56
Sullivan, Beck 1 ..... gas
W. W. Harrah, Operators R. & P. Co. 8 400
Combs & Worley, Wilcox-Pampa Oil Co. 20 180

Completions 10
Production 6548
Dry holes 1
Gas wells 1

HALL COUNTY

Cliff, McAuley 1 ..... dry

HUTCHINSON COUNTY

Dunnaway, Canadian River Gas Co. 1 (second completion) ..... gas
J. R. Barnhill, Stanolind O. & G. Co. 1 gas
Johnson Bros.-F, Dixon Creek O. & R. Co. 1 10
Johnson Bros., Liner Drlg. Co. 2 ..... gas
Ware-B, Stanolind O. & G. Co. 3 350
Harvey, Texilvania Oil Co. 1 24

Completions 6
Production 384
Gas wells 3

MOORE COUNTY

Utey, J. Cloud and Dana O. & G. Co. 1 57
Bridges, Plains Holding Co. 1 ..... gas

Completions 2
Production 57
Gas wells 1

WHEELER COUNTY

O. Close, Murchison & Fain 1 ..... gas

WEST TEXAS FIELDS

Summary of Wells Completed

	Comp.	Prod.	Dry	Gas
Borden	1	0	1	0
Crane	1	624	0	0
Crockett	1	61	0	0
Culberson	1	0	1	0
Fisher	1	0	1	0
Howard	2	60	1	0
Irion	2	35	1	0
Jones	2	261	0	0
Loving	5	407	3	0
Pecos	9	1,495	5	0
Reagan	1	0	1	0
Scurry	1	0	1	0
Tom Green	1	0	1	0
Upton	1	290	0	0
Ward	3	212	0	0
Winkler	1	57	0	0
Total April	33	3,502	16	9
Total March	31	3,939	13	1
Difference	2	437	3	1

Rigs and Wells Drilling

	Rigs	S.D.	Drlg.	Ttl.
Crane	0	1	2	3
Crockett	0	0	0	0
Ector	0	1	2	3
Fisher	0	1	3	4
Glasscock	0	0	0	0
Howard	0	2	1	3
Irion	0	1	3	4
Jones	3	1	6	10
Loving	4	4	10	18
Pecos	2	2	6	10
Reagan	0	0	0	0
Upton	0	1	5	6
Ward	2	10	9	21
Winkler	0	1	1	2
Miscellaneous counties ..	2	21	16	49
Total April	13	56	64	133
Total March	19	49	71	139
Difference	6	7	7	6

WELLS COMPLETED

BORDEN COUNTY

Mrs. E. M. Conrad, Geo. Goodrum 1... dry

CRANE COUNTY

Cowden Bros. & Co.-B, Continental Oil Co. and Zoch 2.. 624

CROCKETT COUNTY

Mary Bullock et al, Taylor-Link Oil 1 61

CULBERSON COUNTY

W. D. Garren, Grisham-Hunter 2..... dry

FISHER COUNTY

Gribble, Roeser & Pendleton 1..... dry

HOWARD COUNTY

O. Chalk, O. Chalk 4..... 60
L. C. Denman, Greene O. & R. Co. 1.... dry

IRION COUNTY

F. Tankersley, Denny & Andrews 1..... 35
W. H. Williams, F. E. Webb et al 1.... dry

JONES COUNTY

J. A. Williams, Yingling et al 1..... 175
Mrs. Jane Hoyt, Ewmo Oil Corp. 1..... 86

LOVING COUNTY

Francis W. Hubbard, C. H. Lockhart 1. dry
McGinley Corp., Erwin & Mohres 1..... dry
W. D. Johnson, H. W. Martin et al 1... dry
J. G. Allen, California Co. 2..... 275
Glenn Salsbury, West Texas Pet. Corp. 1 132

Wells completed 5
Production 407
Dry holes 3

PECOS COUNTY

J. H. Tippett-E (Kirby), Cardinal Oil Co. 5 325
Monroe, Corvette Oil Corp. 1..... 500
A. A. Gray, McCarty Oil Co. 3..... dry
H. H. Butz, Messenger et al 1..... dry
J. H. Harrison, Pure Oil Co. 1..... dry
Myrtle Sellman, Cardinal Oil Co. 1..... dry
J. H. Tippett-E (Kirby), Cardinal Oil Co. 6 270
Monroe, Corvette Oil Corp. 2..... 400
H. J. Eaton, Magnolia Pet. Co. 1..... dry

Wells completed 9
Production 1495
Dry holes 5

REAGAN COUNTY

University, Big Lake Oil Co. 6-C (location abandoned) ..... dry

SCURRY COUNTY

C. H. Earnest, Scurry County Oil Exchange 1 ..... dry

TOM GREEN COUNTY

G. W. Lewis, Pratt & Hancock 3..... dry

UPTON COUNTY

J. T. McElroy, Gulf Prod. Co. 91..... 290

WARD COUNTY

E. R. Allen, Paul Ryan 1..... 12
G. W. O'Brien, Gulf Prod. Co. 16..... 150
J. F. Boogher, Rickford & Fugler 1... 50

Wells completed 3
Production 212

WINKLER COUNTY

J. B. Walton, Magnolia Pet. Co. 1..... 57

SOUTHWEST TEXAS FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Mirando	23	3,277	15	1	1	7	9
Pettus area	4	830	2	0	1	2	3
Dobrowolski	2	8	1	0	0	2	2
Darst Creek	8	4,636	2	0	0	0	0
Unit	0	0	0	0	0	0	0
Cartwright	1	0	1	0	0	0	0
Chittim	1	0	1	0	0	1	1
Saxet	4	160	0	1	1	2	3
Somerset	0	0	0	0	0	0	0
Eddington	0	0	0	0	0	1	1
McFadden	1	0	0	1	0	0	0
Chapman	3	30	0	1	1	2	3
Luling	0	0	0	0	0	0	0
White Point	0	0	0	0	0	2	2
Bruner	0	0	0	0	0	3	3
Lasater	0	0	0	0	0	1	1
Pryor	0	0	0	0	0	0	0
Slick	0	0	0	0	0	0	0
Agua Dulce	0	0	0	0	0	1	1
Miscellaneous	41	0	40	1	10	87	97
Ttl. Apr.	88	8,941	62	5	14	110	124
Ttl. Mar.	56	5,187	20	3	25	184	209
Difference	32	3,754	42	2	11	74	85

WELLS COMPLETED

SCHOOLFIELD-O'BYRNE POOL—DUVAL COUNTY

Bishop Cattle Co., Frasher, Breeding et al 2 1500
Wilson, Magnolia Petroleum Co. 2..... 750
Duval County Ranch Lands, S.R.C. and Vacuum Oil Co. 4 600

WILDCATS—JIM HOGG COUNTY

Jones, A. J. Koiling (J. D. Pulliam, Jr.) 1 ..... abd

WILDCATS—STARR COUNTY

Kelsey-Bass, Kush & Duerkson 1..... abd
Kelsey-Bass, Los Olmos Oil Co. 2..... abd
Kelsey-Bass, Los Olmos Oil Co. 3..... gas

COLE POOL—WEBB COUNTY

S. Benavides, South Texas Prod. Co. 4 307
Cuellar, O. W. Killam 4..... abd
Johnson, O. W. Killam 1..... abd

CHARCO-REDONDO POOL—ZAPATA COUNTY

M. P. de Garza, Mid-West Public Utilities Co. 1..... abd

ESCOBAS-MUCKELROY POOL—ZAPATA COUNTY

Gutierrez, Allied Oil & Gas Co. 12..... abd
A. Bustamente, K. & P. Oil Co. 4..... abd
A. Bustamente, O. W. Killam 4..... abd
Concepcion Bustamente, Nordan & Morris 1 ..... abd
Garza, S. T. Phelps trustee 2..... abd
Garza, W. R. Shankle 3..... 30
Montemayor, S.R.C. Oil Co. 5-D..... abd

MIRANDO-VALLEY POOL—ZAPATA COUNTY

Killam, O. W. Killam 4..... abd

CUELLAR-JENNINGS—ZAPATA COUNTY

Cuellar, O. W. Killam 42-B 100

WILDCATS—WEBB COUNTY

Benavides, Cole Petroleum Co. 3..... abd

WILDCATS—ZAPATA COUNTY

A. Gutierrez, B. F. Nixon 1..... abd
Flores, John Poppas Pool, Inc. 1..... abd

Wells completed 22
Production 3277
Dry 15
Gas production 3,000,000

PETTUS AREA—BEE COUNTY

Block 23, Houston Oil Co. 1..... abd
Block 33, Houston Oil Co. 1..... abd
Ray, United Production Co. 35..... 480
Ray, United Production Co. 36..... 350

Wells completed 4
Production 830
Dry 2

DOBROWOLSKI POOL—BEXAR COUNTY

Beck, Gatlin Oil Co. 6..... 3
W. F. Gembler, I. L. Dingman..... abd

DARST CREEK—GUADALUPE COUNTY

Thomas Dix, Gulf Production Co. 16..1305
L. G. Denman, Humble Oil & Ref. Co. 33-A 800
Denman, Humble Oil & Ref. Co. 34-A.. 600
Rand Miller, Magnolia Petroleum Co. 8 103
Roamel, Magnolia Petroleum Co. 1..... abd
Mrs. J. L. Manford, Simms Oil Co. 5.. abd
Mrs. A. E. Dowdy, Sun Oil Co. 1..... 88
Knoblock, Sun Oil Co. 14.....1740

Wells completed 8
Production 4636
Dry 2

CARTWRIGHT POOL—LIVE OAK COUNTY

Brown Land & Cattle Co., Houston Oil Co. 3 ..... abd

CHITTIM POOL—MAVERICK COUNTY

Chittim, Texas Gas Utilities Co. 7..... abd

SAXET POOL—NUECES COUNTY

Sedwick, Moody-Seagraves Prod. Co. 1. 70
Rand Morgan, Houston Oil Co. 2..... 25
J. F. Boory, O. C. Best et al 1..... gas
John Dunn, Saxet Oil Co. 7..... 65

Wells completed 4
Production 95
Gas production 35,000,000

McFADDEN POOL—VICTORIA COUNTY

McFadden, The Texas Co. 2..... gas

CHAPMAN POOL—WILLIAMSON COUNTY

L. W. Fuchs, Chapman et al 7 20
M. V. Lawrence, Collins et al..... abd
J. C. Abbott, Ertell et al..... 10

Wells completed 3
Production 30
Dry 1

WILDCATS—MISCELLANEOUS COUNTIES

Atascosa County—
Medina Irrigation, Cullen & Bender 1.. abd

Bee County—
Stoltzfus, Cosden Oil Co. 1..... abd
A. C. Billingsley, Hicks & Patton 1 .. abd
Mrs. Denver Chestnut, Hurlbut et al 1 abd
J. C. Wood, Humble & Hurlbut et al 1 abd
Laura E. Weiss, Ed Price 1..... abd
Laura E. Weiss, Ed Price 2..... abd

Bexar County—
H. Schnell, Conner et al 1..... abd
I. A. Beck, Gatlin Oil Co. 2..... oil
San Antonio Surburban Irrigation Farms, Waggoner & Stieren 1..... abd

Caldwell County—
W. H. Callihan, Callihan et al 3..... abd
McMahon, Mills et al 2..... gas
J. R. Moore, Neuhaus et al 1..... abd

DeWitt County—
Leinhardt, H. T. Roe et al 1..... abd

Gonzales County—
H. K. Weber, Acme Oil & Roy. Corp. 1 abd

Jim Wells County—
McGill, Carail O. & G. Co. 1..... abd
Doering, R. H. Ewell 1..... abd
Shaeffer, Gulf Prod. Co. 2..... abd

Karnes County—
Cockran, A. Edmiston 1..... abd
Ragsdale, J. F. Morrisey et al 1..... abd

Live Oak County—
Mary E. Reeves, Newton Oil Co. 1.... abd
C. E. Key, Jacob, Buzzini & Pickett, Inc. 1 ..... abd
J. D. Ponder, Southern Expltn. Co. 1.. abd

Medina County—
Crawford, Calco Pet. Corp. 1..... abd
Medina Valley Irrig., M. Eskridge et al 1 abd

Nueces County—
W. B. Mohle, H. H. Weinert et al 1... abd

Real County—
J. M. Auld, Evans & Sprinkle 1..... abd

Victoria County—
McFadden, United Prod. Co. 1-B..... abd

Williamson County—
H. O. Schlickheisen, DeLong et al 1 .. abd
Caroline Hurta, Wilburn et al 1..... abd

Zavala County—
W. L. Gates, F. W. Weigand 1..... abd

Wells completed 31
Abandoned 30
Gas 1
Gas production 9,000,000

MISSISSIPPI FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas*	Rigs	Drlg.	Ttl.
Clark	0	0	0	0	0	1	1
Clay	0	0	0	0	0	1	1
Grenada	1	0	1	0	0	1	1
Hinds	3	0	3	1	1	5	6
Jasper	0	0	0	0	0	1	1
Lafayette	0	0	0	0	1	0	1
Madison	1	0	1	0	1	0	1
Monroe	1	0	0	1	0	2	2
Rankin	3	0	1	2	3	3	6
Scott	0	0	0	0	1	0	1
Smith	1	0	1	0	0	0	0
Warren	1	0	1	0	1	2	3
Winston	0	0	0	0	0	1	1
Yalobusha	0	0	0	0	0	1	1
Ttl. Apr.	11	0	7	4	7	19	26
Ttl. Mar.	2	0	2	0	5	23	28
Difference	9	0	5	4	2	4	2

*Gas production: Hinds County, 40,000,

000 feet; Monroe County, 2,500,000 feet; Rankin County, 55,000,000 feet; total, 97,500,000 feet.

WELLS COMPLETED

GRENADA COUNTY

18-22- 4 Dubard, Carter-Pace 1 ..... dry

HINDS COUNTY

15- 5- 1 Kabbles, Cane River Oil & Gas Co. 1 ..... dry
30- 6- 2 McLaurin, Gulf Ref. Co. 1 ... dry
15- 5- 1 Maley, Love Pet. Co. 2 ..... gas

Gas production 40,000,000

MADISON COUNTY

11- 9- 1 Cemeron, Central Oil & Gas Co. 1 ..... dry

MONROE COUNTY

18-13-17 Harris, Amory Pet. Co. 1.... gas

Gas production 2,500,000

RANKIN COUNTY

12- 5- 1 Ellis, J. T. Hester 1 ..... gas
6- 5- 2 Gammill-Hartfield, Millstein Oil & Gas Co. 1 ..... dry
12- 5- 1 Ragland, Pioneer Oil & Gas Co. 1 ..... gas

Gas production 55,000,000

SMITH COUNTY

10- 3- 7 Adams-Banks Lbr. Co., Pocahontas Natural Gas Co. 1. dry

WARREN COUNTY

31-17- 5 Clark, Dixie Pet. Co. 1 ..... dry

ARKANSAS FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas*	Rigs	Drlg.	Ttl.
Chicot	0	0	0	0	1	1	
Clay	0	0	0	0	1	1	
Cleburne	0	0	0	0	1	1	
Columbia	0	0	0	0	1	0	1
Dallas	0	0	0	0	0	1	1
Garland	0	0	0	0	0	2	2
Grant	0	0	0	0	0	1	1
Hot Springs	0	0	0	0	0	1	1
Lafayette	0	0	0	0	0	2	2
Lawrence	0	0	0	0	1	0	1
Little River	0	0	0	0	1	0	1
Logan	0	0	0	0	0	1	1
Miller	2	0	2	0	1	5	6
Ouachita	4	98	1	0	0	1	1
Pike	0	0	0	0	1	1	2
Pope	0	0	0	0	0	2	2
Scott	0	0	0	0	0	2	2
Sebastian	1	0	0	1	0	0	0
Union	4	845	1	0	2	5	7
Van Buren	0	0	0	0	0	1	1
Washington	0	0	0	0	0	2	2
Yell	0	0	0	0	0	1	1
Ttl. Apr.	11	943	4	1	7	31	38
Ttl. Mar.	5	390	2	1	7	40	47
Difference	6	553	2	0	0	9	9

*Gas production: Sebastian County, 3,250,000 feet.

WELLS COMPLETED

MADISON COUNTY

1-17-26 Hallin, J. W. Baxter 2 (loc.) abd
1-17-26 Hallin, J. W. Baxter 3 (loc.) abd

MILLER COUNTY

24-15-26 Johnson, C. V. Lentz 2 ..... dry
24-15-26 Johnson, Lentz et al 3 ..... dry
9-16-20 Rose, Selzer & McRea 1 .... abd

OUACHITA

16-15-17 Buck, Belmont et al 1 ..... dry
23-15-16 Doyle, L. H. Hamilton 3 55
21-15-19 Grayson, J. D. Reynolds 1 ... 40
22-15-9 Wesson, Wesson & Bonner 1. 3

Production 98

SEBASTIAN COUNTY

28- 8-30 Bryant, Ozark Natural Gas Co. 1 ..... gas

Gas production 3,250,000

UNION COUNTY

35-16-17 Hogg, S. B. Hickman 1 ..... dry
10-18-13 Thompson, Marine Oil Co. 1-E 210
10-18-13 Thompson, Marine Oil Co. 4-B 235
12-17-14 Rawlston, Ohio Oil Co. 2 (loc.) ..... abd
12-17-14 Furlough, Ohio Oil Co. 3 400

Wells completed 4
Production 845

WASHINGTON COUNTY

14-15-32 Cunningham, Delbert & Graves 1 ..... abd

NORTH LOUISIANA

Summary of Field Operations

	Comp.	Prod.	Dry	Gas*	Rigs	Drlg.	Ttl.
Bienville	0	0	0	0	1	1	
Bossier	2	0	1	1	0	6	6
Caddo	5	200	2	1	4	5	9
Caldwell	0	0	0	0	1	1	2
Catahoula	0	0	0	0	0	1	1
Claiborne	0	0	0	0	0	1	1
Concordia	2	0	0	0	1	1	2
DeSoto	1	40	0	0	1	4	5
Morehouse	0	0	0	0	1	0	1
Natchitoches	0	0	0	0	0	4	4
Ouachita	0	0	0	0	2	0	2
Red River	0	0	0	0	0	2	2
Richland	4	0	0	4	6	6	12
Sabine	9	350	7	0	5	20	25
Tensas	1	0	1	0	0	1	1
Union	2	0	0	2	0	1	1
Vernon	1	0	1	0	0	0	0
Webster	0	0	0	0	1	2	3
West Carroll	0	0	0	0	0	1	1
Ttl. Apr.	27	590	13	8	22	57	79
Ttl. Mar.	25	1,665	17	4	26	62	88
Difference	2	1,065	5	4	4	5	9

*Gas production: Bossier, 30,000,000 feet; Caddo, 29,748,700 feet; Richland, 149,679,000 feet; Union, 3,581,000 feet; total, 212,008,700 feet.

WELLS COMPLETED

22-19-11 Kendrick, H. I. Morgan 13-B gas
19-16-10 Hodges, R. O. Roy 1 ..... dry

Gas production 30,000,000

CADDO PARISH

32-17-13 Weiler, Ralph Davidson 1 ... dry
29-20-15 Nunnaly, Falcon Oil Co. 5 ... 50
9-18-16 Wheeler, Pyramid Oil & Gas Co. 1 ..... dry
32-21-15 Hicks, Shreveport Oil Corp. 8 150
5-22-16 Fortner, United Gas Public Service Co. 1 ..... gas

Production 200
Gas production 29,748,700

CONCORDIA PARISH

23- 8-10 Grassmere, Fred Stovall 1 ... dry
33- 8-9 Miller, United Gas Public Service Co. 1 ..... dry

DE SOTO PARISH

32-13-11 Nabors, Ernest Nicholson 1... 40

RICHLAND PARISH

21-16-6 Thomason, Ark.-La. Pipe line Co. 5-C ..... gas
13-16-5 Cooper, Richland Operating Co. 1 ..... gas
15-16-6 Lindlow, United Carbon Co. 1 gas
25-17-5 Earle, United Gas Public Service Co. 3 ..... gas

Gas production 149,679,000

SABINE PARISH

1- 7-12 Sabine Lbr. Co., H. H. Alvord, Jr., 1 (loc.) ..... abd
1- 7-12 Sabine Lbr. Co., H. H. Alvord, Jr., 2 ..... dry
1- 7-12 Sabine Lbr. Co., W. M. Coates 2-A ..... dry
34-10-12 Cook Land Co., John Henry Oil & Gas Co. 3 ..... dry
33- 8-12 Ferguson, Ab Jones et al 1.. dry
8- 7-11 La. Long Leaf Lr. Co., Jordon Drilling Co. 1 300
3- 8-11 Cooper, Lacy Production Co. 1 dry
9- 7-12 Bowman-Hicks, Loring Oil Co. 16 (loc.) ..... abd
2- 7-12 Bowman-Hicks, Ohio Oil Co. 7 50
8- 7-19 Smith, Packard Oil & Gas Co. 1 ..... dry
36- 8-12 Carter, Trans-American Oil Co. 1 ..... dry

Wells completed 9
Production 350
Dry 7

TENSAS PARISH

10-10-10 Fowler, Seip et al 1 ..... dry

UNION PARISH

14-21-3 Strange, Nemours Corp. 1 .. gas
25-22-3 Pace-Hamby, Nemours Corp. 1 gas

Gas production 3,581,000

VERNON PARISH

14- 2-11 Delta Land Co., Weir & Smith 1 ..... dry

GULF COAST FIELDS

Summary of Field Operations

Texas Coast

Field—	Comp.	Prod.	Abd.	Gas	Rigs	Drlg.	Ttl.
Allen	0	0	0	0	2	2	
Barbers Hill	12	10,811	3	0	2	22	24
Batson	1	10	0	0	0	0	0
Big Creek	0	0	0	0	1	1	
Blue Ridge	1	1,200	0	0	0	1	1
Boling	0	0	0	0	0	1	1
Brenham	0	0	0	0	0	1	1
Clay Creek	1	850	0	0	0	2	2
Damon Mound	1	850	0	0	1	0	1
Esperson	0	0	0	0	0	3	3
Hankamer	0	0	0	0	0	1	1
High Island	0	0	0	0	1	1	2
Hull	1	200	0	0	0	1	1
Humble	4	32	2	0	2	3	5
Lost Lake	0	0	0	0	0	1	1
Moss Bluff	4	500	3	0	1	4	5
Nash	0	0	0	0	0	1	1
North Dayton	1	500	0	0	1	0	1
Orchard	2	550	1	0	0	1	1
Pierce Junction	6	2,530	1	0	0	2	2
Refugio	10	2,590	2	0	1	16	17
Raccoon Bend	1	200	0	0	0	0	0
Saratoga	2	23	0	0	0	1	1
Spindletop	2	16	2	0	0	1	1
Miscellaneous	7	0	7	0	3	24	27
Ttl. Apr.	57	20,863	21	0	12	90	102
Ttl. Mar.	70	12,988	35	4	14	93	107
Difference	13	7,875	14	4	2	3	5

Louisiana Coast

Bayou Blue	1	0	1	0	0	1	1
Bayou Boullion	1	0	1	0	0	1	1
Black Bayou	3	530	2	0	0	0	0
Edgerly	1	0	1	0	0	1	1
Jennings	1	0	1	0	0	0	0
Hackberry	0	0	0	0	0	1	1
Lake Barre	1	0	1	0	0	1	1
Lockport	3	3,155	0	0	0	4	4
Port Barre	0	0	0	0	0	1	1
Sorrento	1	300	0	0	0	0	0
Starks	0	0	0	0	0	1	1
Sulphur	0	0	0	0	0	3	3
Sweet Lake	0	0	0	0	0	2	2
Vinton	3	1,015	0	0	0	2	2
Welsh	1	0	1	0	0	1	1
Miscellaneous	7	0	7	0	1	12	13
Ttl. Apr.	23	5,000	15	0	1	31	32
Ttl. Mar.	20	2,633	7	0	1	43	44
Difference	3	2,367	8	0	0	12	12
Total Gulf Coast:							
Ttl. Apr.	80	25,863	36	0	13	121	134
Ttl. Mar.	90	15,621	42	4	15	136	151
Difference	10	10,242	6	4	2	15	17

TEXAS COAST

WELLS COMPLETED

BARBERS HILL—CHAMBERS COUNTY

Wilburn, Mills Bennett Prod. Co. 1.... 350
Fisher, Mills Bennett Prod. Co. 2 1030
Wilburn, Gulf Prod. Co. 4 510
Barber, Humphreys Corp. 3-B 1630
Lula Barber, Humphreys Corp. 1 2100
Woodward, McAlbert Oil Co. 5 ..... abd
Chambers, Sun Oil Co. 8 800
McKinney fee, Sun Oil Co. 4 ..... abd
Smith, Sun Oil Co. 1 3120
Chambers, Yount Lee Oil Co. 17 200
Winfree, Yount Lee Oil Co. 3 1021
Woodward, Yount Lee Oil Co. 10 ..... abd

Wells completed 12
Production 10,811
Abandoned 3

BLUE RIDGE—FORT BEND COUNTY

Means, Doney & Means 1 1200

BATSON—HARDIN COUNTY

Honeymoon, Ada Bella Oil Co. 146 10

CLAY CREEK—WASHINGTON COUNTY

Clay, Sun Oil Co. 5 850

DAMOND MOUND—BRAZORIA COUNTY

Wisdom, Layne et al 7-A 850

HULL—LIBERTY COUNTY

Dolbear, Republic Prod. Co., 54 200

HUMBLE—HARRIS COUNTY

Perkins, Southern Coastal Oil Co. 2.... 20
Morris, South Texas Pet. Co. 15 ..... abd
Beck, Sun Oil Co. 1 ..... abd
C. O. & G., The Texas Co. 29 13

Wells completed 4
Production 33
Abandoned 2

MOSS BLUFF—LIBERTY COUNTY

McFaddin, Gulf Prod. Co. 3 ..... abd
Breeding, Humble Oil & Ref. Co. 2.... abd
Sterling, Humble Oil & Ref. Co. 7 500
Munger, Texas Gulf Sulphur Co. 1 .... abd

Wells completed 4
Production 500
Abandoned 3

NORTH DAYTON—LIBERTY COUNTY

Gulf fee, Borsodi Oil Co. 1 500

ORCHARD—FORT BEND COUNTY

Moore, Gulf Prod. Co. 22 ..... abd
Moore, Gulf Prod. Co. 28 550

Wells completed 2
Production 550
Abandoned 1

PIERCE JUNCTION—HARRIS COUNTY

Manchester, Gulf Prod. Co. 1 1200
Jones fee, Grayburg & Kouri 1 ..... abd
Tayler, Gulf Prod. Co. 32 300
G. H. & S. A., Rio Bravo Oil Co. 102.. 70
Gulf fee, Tilton & Perot 1 360
Minchen, Warner-Quinlan Co. 2 600

Wells completed 6
Production 2530
Abandoned 1

RACCOON BEND—AUSTIN COUNTY

Payne, Humble Oil & Ref. Co. 12 200

REFUGIO—REFUGIO COUNTY

Doughty, Houston Oil Co. 1 50
O'Brien Blk. 5, Houston Oil Co. 1 50
Rooke, Houston Oil Co. 1-B ..... abd
Mercy Academy, Moody-Seagraves-Phillips 2 180
Ryals, Pearson Properties, Inc. 4 600
Rogers, L. L. Smith 2 ..... abd
O'Brien, United Prod. Corp. 10 800
O'Brien, United Prod. Corp. 11 100
Mitchell, United Prod. Corp. 2 10
Mitchell, United Prod. Corp. 4 800

Wells completed 10
Production 2590
Abandoned 2

SARATOGA—HARDIN COUNTY

Cotton, Rio Bravo Oil Co. 112-A 15
Cotton, Rio Bravo Oil Co. 113-A 8

Wells completed 2
Production 23

SPINDLETOP—JEFFERSON COUNTY

Fee, Yount Lee Oil Co. 12 16
McFaddin, Yount Lee Oil Co. 41 ..... abd
McFaddin, Yount Lee Oil Co. 146 ..... abd

Wells completed 3
Production 16
Abandoned 2

MISCELLANEOUS TEXAS

BRAZORIA COUNTY

Bryan Heights fee, Freeport Sulphur Co. 2,001 ..... abd
Manvel, Ewing, The Texas Co. 1 ..... abd

SAN JACINTO COUNTY

A. P. Gardner Sur., McMurray, Arkansas Fuel Oil Co. 1 ..... abd

VICTORIA COUNTY

Traviesa Sur., McFaddin, Lion Oil & Ref. Co. 3-A ..... abd
West, Newton et al 1 ..... abd
M. Traviesa Sur., McFaddin, United Prod. Corp. 1-B ..... abd

WASHINGTON COUNTY

J. H. Alcorn Sur., Hahn, Cord Oil Co. 1-A ..... abd

Wells completed 7
Abandoned 7

LOUISIANA COAST

BAYOU BLUE—IBERVILLE PARISH

Schwing, Standard Oil Co. 1-A ..... abd

BAYOU BOUILLON—ST. MARTIN PARISH

Woodyard Lake, Humble Oil & Ref. Co. 1 ..... abd

BLACK BAYOU—CAMERON PARISH

State, Shell Pet. Corp. 2 ..... abd
Watkins, Shell Pet. Corp. 12 ..... abd
Watkins, Shell Pet. Corp. 16 530

Wells completed 3
Production 530
Abandoned 2

EDGERLY—CALCASIEU PARISH

Reed, Strange Oil Co. 1 ..... abd

JENNINGS—ACADIA PARISH

Housierre, Latrielle 9 ..... abd

LAKE BARRE—TERREBONNE PARISH

State, The Texas Co. 8 ..... abd

LOCKPORT—CALCASIEU PARISH

Martha Moss, Union Sulphur Co. 2 2500
Bordages, Vacuum Oil Co. and Gulf Ref. Co. 7 55
Farquahar, Vacuum Oil Co. 8 600

Wells completed 3
Production 3155

SORRENTO—CALCASIEU PARISH

United Land, Gulf Ref. Co. 19 300

VINTON—CALCASIEU PARISH

Gardner, Gulf Ref. Co. 6 700
Wilson, Wilson-Broach 2 5
Wilson, Wilson-Broach 8 310

Wells completed 3
Production 1015

WELSH—JEFF DAVIS PARISH

Trimble Atterbury, H. T. McClain 1 .... abd

MISCELLANEOUS LOUISIANA

IBERIA PARISH

Jefferson Island—Lake Peigneur, Jefferson Lake Oil Co. 10 ..... abd
Vermillion Bay—Vermillion Bay, The Texas Co. 6 ..... abd

ST. JAMES PARISH

Sec. 1-12s-4e, Uncle Sam, Convent Oil Co. 2 ..... abd

ST. TAMMANY PARISH

Sec. 5-6s-10e, Coussack, Wash & St. Tammany 2 ..... abd

TERREBONNE PARISH

Sec. 102-17s-17e, Minor, Louisiana Gas & Fuel Co. 1 ..... abd
Caillou Island—State, The Texas Co. 4. abd
Bay St. Elaine—State, The Texas Co. 6. abd

Wells completed 7
Abandoned 7

MISSOURI

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl
St. Louis	1	0	1	0	0	1	1
	–	–	–	–	–	–	–
Ttl. Apr.	1	0	1	0	0	1	1
Ttl. Mar.	1	0	1	0	0	1	1
	–	–	–	–	–	–	–
Difference	0	0	0	0	0	0	0

TENNESSEE FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Putnam	0	0	0	0	0	1	1
Smith	0	0	0	0	0	1	1
Warren	0	0	0	0	0	1	1
Clay	0	0	0	0	0	2	2
White	0	0	0	0	0	1	1
Dickson	0	0	0	0	0	2	2
Morgan	0	0	0	0	0	2	2
Lincoln	0	0	0	0	0	2	2
Overton	0	0	0	0	0	2	2
Franklin	0	0	0	0	0	1	1
Cheatham	0	0	0	0	0	1	1
Robertson	0	0	0	0	0	1	1
Montgomery	0	0	0	0	0	1	1
Ttl. Apr.	0	0	0	0	0	18	18
Ttl. Mar.	0	0	0	0	0	17	17
Difference	0	0	0	0	0	1	1

KENTUCKY FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Barren	5	100	1	2	0	2	2
Ohio	2	12	0	0	4	27	31
Daviess	1	0	1	0	0	17	17
Hancock	0	0	0	0	0	7	7
Henderson	0	0	0	0	0	2	2
McLean	3	70	0	1	7	0	7
Webster	3	15	1	0	0	0	0
Hart	41	3,120	18	3	0	42	42
Hopkins	0	0	0	0	0	3	3
Union	0	0	0	0	0	3	3
Todd	0	0	0	0	0	1	1
Muhlenberg	2	25	1	0	0	3	3
Caldwell	0	0	0	0	0	1	1
Green	2	0	2	0	0	1	1
Cumberland	0	0	0	0	0	2	2
Butler	0	0	0	0	0	1	1
Taylor	0	0	0	0	0	1	1
Wayne	0	0	0	0	0	2	2
Estill	1	0	0	1	0	3	3
Lee-Owsley	1	1	0	0	0	3	3
Lawrence-Johnson	1	5	0	0	0	3	3
Johnson-Magoffin	0	0	0	0	0	4	4
Clay	0	0	0	0	1	0	1
Knox	0	0	0	0	0	1	1
Madison	0	0	0	0	0	1	1
Floyd	4	0	0	4	0	0	0
Bell	0	0	0	0	0	1	1
Ttl. Apr.	66	3,348	24	11	12	129	141
Ttl. Mar.	50	637	17	17	13	144	157
Difference	16	2,711	7	6	1	15	16

WELLS COMPLETED

BARREN COUNTY

Glasgow—Christ Wilson, Unknown parties 1 50
Edwards est., Unknown parties 1 ... 50
Joe Curle, Unknown parties 1 ..... dry
Henry Montgomery, Unknown parties 1 ..... gas
Mrs. S. S. Guinn, Unknown parties 1. gas

Wells completed 5
Production 100
Dry 1
Gas 1

OHIO COUNTY

Hartford—Martha Medcalf, Brenner & Adams 1 7
E. E. Fuqua, F. M. and J. M. Meredith 7 5

Wells completed 2
Production 12

DAVIESS COUNTY

Owensboro—Rogers, Ira C. Huff 1 .... dry

McLEAN COUNTY

Calhoun—Nina Wilhite, Cameron & Thompson 2 50
G. B. McManama, McLean Dev. 2 ... 20
Guy S. Turner, Ellis & Young 1 .... gas

Wells completed 3
Production 70
Gas 1

WEBSTER COUNTY

Sebree—Edward Walker, Christian & Schmitt 2 10
Edward Walker, Christian & Schmitt 3 ..... dry
Edward Walker, Christian & Schmitt 4 5

Wells completed 3
Production 15
Dry 1

HART COUNTY

LeGrande—Newberry, Richards & Gebbi 1 ..... dry
Maxie, B. B. and Horace Norris ..... dry
Asberry, Richards & Gebbi 1 ..... dry
E. Nunn, George Morrison 1 ..... dry
Harry Simpson, Fred Estes 1 ..... dry
R. T. Reynolds, Tichenour & Mann 1 dry
W. W. Stales, Mecca Oil 1 ..... dry
J. H. Taylor, John Wright 1 ..... dry
Dilly Arthur, Unknown parties 1 .... dry
D. A. Chapman, Unknown parties 1.. dry
W. L. Hatchett, Unknown parties -.. dry
Mrs. G. L. McKinney, Unknown parties 1 ..... dry
Clarence Sanduge, Unknown parties 1 dry
J. T. Cartmill, Penn-Kentucky Oil 1 dry
Mayfield, H. Z. Clark 1 ..... dry
Fultz, Rex-Pyramid Oil 1 ..... dry
Blaine Vance, McClurkin, Hughes & Co. 1 ..... dry
W. L. Chaney, John H. McClurkin 1. dry
McCubbin, John H. McClurkin 1 .... gas
Pedigo-Taomas, Norris Bros. 1 ..... gas
Bales, Pearson Oil Synd. 1 ..... gas
J. A. Edwards, Pearson Oil Synd. 1.. 50
E. T. Smith, H. F. Norris & Co. 4.. 150
R. H. Hatcher, Norris & Davis 4 200
Lee Wilson, B. F. Wilson & Co. 2 300
Blue Springs lot, Bales & Co. 1 100
Jas. Richardson, L. C. Young & Co. 1 150
J. Gillock 100-ac., H. Z. Clark 1 200
Wm. Cook, Norris Bros. 1 10
B. Lockett, B. F. Wilson 1 50
Wm. Ward, L. C. Young & Co. 1 50
A. S. Edwards, John Wright 1 50
Mrs. P. L. McKinney, Unknown parties 2 10
W. T. Spencer, Hupp, Duff & Bundy 1 600
Grubb, Laramore, Snyder & Co. 1 500
Wm. McKinley, L. C. Young & Co. 3.. 150
J. H. McGhee Legrande, L. C. Young & Co. 1 200
B. Lockett, B. F. Wilson 2 50
B. Lockett, B. F. Wilson 3 50
Parrish Richardson, C. E. Daugherty 1 50
M. Peyton, C. H. Clark 1 200

Wells completed 41
Production 3120
Dry 18
Gas 3

MUHLENBERG COUNTY

Greenville—Hugh F. Lee, H. & K. Producers Co. 2 35
H. Roe, H. & K. Producers Co. 1..... dry

Wells completed 2
Production 25
Dry 1

GREEN COUNTY

Greensburg—Givin Bros., Courtney Combs & Co. 1 ..... dry
John Madden, Park & Pierson 1 .... dry

Wells completed 2
Dry 2

ESTILL COUNTY

District 8—Delina Bishop, Raydure, Bunton & Co. 1 ..... gas

LEE-OWSLEY COUNTIES

District 18—Robt. Day, James G. Cooper 6 1

LAWRENCE-JOHNSON COUNTIES

District 22—C. K. Dobyns, Garrison & Townsend 23 5

FLOYD COUNTY

Prestonburg—Kate Allen, Southern Gas 2 ..... gas
M. F. Preston, Southern Gas 2 ..... gas
Isaac Bradley, Southern Gas 3 ..... gas
Collins, Southern Gas 1 ..... gas

Wells completed 4
Gas 4

ROCKY MOUNTAIN AREA

NEW MEXICO

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Chaves	0	0	0	0	0	2	2
De Baca	0	0	0	0	0	2	2
Eddy	1	3	0	0	0	5	5
Lea	2	5,049	0	0	4	7	11
McKinley	0	0	0	0	0	5	5
Rio Arriba	0	0	0	0	0	2	2
San Juan	0	0	0	0	3	8	11
San Miguel	0	0	0	0	0	5	5
Torrance	0	0	0	0	0	2	2
Valencia	0	0	0	0	0	2	2
Miscellaneous.	0	0	0	0	1	7	8
Total Apr.	3	5,412	0	0	8	47	55
Total Mar.	3	4,108	1	0	8	49	57
Difference	0	1,304	1	0	0	2	2

NEW MEXICO

WELLS COMPLETED

28-18-28 State, Flynn, Welch & Yates Co. 2 3
19-21-36 Meredith, California Co. 1.... 225
32-18-38 Grimes, Gypsy Oil Co. 7..... 5184

Wells completed 3
Production 5412

MONTANA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Carbon	0	0	0	0	2	5	7
Cascade	0	0	0	0	0	2	2
Choteau	1	0	1	0	0	1	1
Fergus	0	0	0	0	0	5	5
Glacier	0	0	0	0	1	4	5
Hill	1	0	1	0	2	2	4
Judith Basin.	0	0	0	0	0	2	2
Liberty	1	0	1	0	1	4	5
Pondera	0	0	0	0	0	2	2
Rosebud	0	0	0	0	0	2	2
Teton	0	0	0	0	1	2	3
Toole	1	0	1	0	1	11	12
Miscellaneous.	0	0	0	0	2	17	19
Total Apr.	4	0	4	0	10	59	69
Total Mar.	5	12	1	3	12	57	69
Difference	1	12	3	3	2	2	0

WELLS COMPLETED

11-27- 4w Volbrecht, Ashalta Oil Co. 1 dry
17-27- 4e Poindexter, Western Natl. Gas Co. 1 ..... dry
4-32-12e Dull, Jones, Rice & Perkins 1 abd
12-28-11 Flack, Williston-Shelby O. & G. 1 ..... dry

Wells completed 4
Dry 2
Abandoned 2

COLORADO

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Fremont	0	0	0	0	0	12	12
La Plata	0	0	0	0	3	3	3
Larimer	2	100	0	1	2	7	9
Las Animas	0	0	0	0	1	3	4
Moffat	2	100	0	1	6	3	9
Montezuma	0	0	0	0	1	2	3
Morgan	0	0	0	0	0	2	2
Rio Blanco	0	0	0	0	1	2	3
Routt	0	0	0	0	1	2	3
Weld	0	0	0	0	1	2	3
Miscellaneous.	0	0	0	0	1	33	34
Total Apr.	4	200	0	2	14	71	85
Total Mar.	2	0	2	0	13	73	86
Difference	2	200	2	2	1	2	1

WELLS COMPLETED

23-4n-92 Parkinson, Midwest Ref. Co. 7-M 100
5-11-97 Musser, Mountain Fuel Supply Co. 1 ..... gas
21-4n-69 Hertha, Standard Oil Co. of Colorado 1 100
20-4n-69 Hall, Standard Oil Co. of Colorado 1 ..... gas

Wells completed 4
Production 200
Gas wells 2
Gas production 35,000,000

WYOMING

Summary of Field Operations

Dist. or County—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Salt Creek	0	0	0	0	0	1	1
Big Horn	0	0	0	0	1	5	6
Carbon	0	0	0	0	1	9	10
Converse	1	350	0	0	2	4	6
Crook	1	7	0	0	0	0	0
Fremont	0	0	0	0	0	6	6
Hot Springs	0	0	0	0	0	2	2
Johnson	0	0	0	0	0	2	2
Lincoln	0	0	0	0	0	2	2
Natrona*	0	0	0	0	1	11	12
Niobrara	0	0	0	0	0	2	2
Park	1	0	0	1	4	13	17
Sweetwater	0	0	0	0	1	8	9
Sublet	0	0	0	0	0	5	5
Washakie	0	0	0	0	0	1	1
Uinta	0	0	0	0	0	6	6
Weston	6	1,020	0	0	4	9	13
Total Apr.	9	1,377	0	1	14	86	100
Total Mar.	1	0	0	1	9	89	98
Difference	8	1,377	0	0	5	3	2

*Exclusive of Salt Creek.

WELLS COMPLETED

13-46-64 Leithart et al 4 10
14-46-64 Bock, Lambie Oil Co. 6..... 75
14-46-64 Chadron-Osage Co. 10..... 75
14-46-64 Chadron-Osage Co. 9..... 50
14-46-64 Chadron-Osage Co. 11..... 800
11-46-64 Dornacher, Bock & Monahan 1 10
25-53-100 Henderson Prod. Co. 1..... gas
29-49-66 W. F. Clark et al 1..... 7
9-33-76 Jones, Ohio Oil Co. 5..... 350

Wells completed 9
Production 1377
Gas wells 1
Gas production 10,000,000

UTAH

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Total Apr.	0	0	0	0	0	20	20
Total Mar.	0	0	0	0	0	20	20
Difference	0	0	0	0	0	0	0

CENTRAL OHIO FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Ashland	5	4	2	2	4	8	12
Medina	5	15	1	2	2	3	5
Lorain	2	0	1	1	2	6	8
Wayne	2	0	1	1	0	4	4
Holmes	1	0	1	0	0	0	0
Cuyahoga	1	0	1	0	0	0	0
Ashtabula	0	0	0	0	0	2	2
Richland	0	0	0	0	2	3	5
Knox	1	0	0	1	0	1	1
Coshocton	3	6	1	1	0	5	5
Summitt	0	0	0	0	0	4	4
Licking	0	0	0	0	1	2	3
Muskingum	2	0	0	2	5	13	18
Athens	4	1	2	1	3	7	10
Lawrence	0	0	0	0	4	5	9
Tuscarawas	0	0	0	0	2	2	4
Stark	4	0	0	4	7	13	20
Fairfield	0	0	0	0	0	2	2
Guernsey	1	0	1	0	0	7	7
Belmont	0	0	0	0	2	6	8
Gallia	0	0	0	0	0	2	2
Scioto	0	0	0	0	0	2	2
Pike	0	0	0	0	0	2	2
Geauga	0	0	0	0	0	1	1
Total Apr.	31	26	11	15	34	100	134
Total Mar.	30	290	7	16	36	99	135
Difference	1	264	4	1	2	1	1

COMPLETED WELLS

ASHLAND COUNTY

Jackson—Wade Welch, Ohio Fuel Gas 2-5,475 ..... gas
Kent Welch, Appalachian Gas Corp. 1 dry
Lake—J. M. Mosher, Great Lakes Oil 1 dry
David Horn, Harmon & George 4 ... 4
Orange—Royal J. Welch, Ohio Fuel Gas 2-5,469 ..... gas

Wells completed 5
Production 4
Dry 2
Gas 2

MEDINA COUNTY

Chatham—M. A. Frank, Edson & Co. 17 10
A. E. Packard, Edson Co. 13 5
Homer—P. A. Grissinger, Barnhart & Co. 1 ..... gas
A. E. Gates, Ohio Fuel Gas 1-5,473... gas
Brunswick—A. W. Bowman, Ohio Fuel Gas 1 ..... dry

Wells completed 5
Production 15
Dry 1
Gas 2

LORAIN COUNTY

Columbia—Leon Richards, Ohio Fuel Gas 1-2,300 ..... gas
Ridgeville—Carnelius Mohr, Clyde Daugherty 1 ..... dry

Wells completed 2
Dry 1
Gas 1

WAYNE COUNTY

Congress—W. N. D. Jones, Ohio Fuel Gas 1-5,473 ..... gas
Plain—Myers & Horn, Hulse & Kundtz 1 dry

Wells completed 2

HOLMES COUNTY

Washington—Clark Miller, Ohio Fuel Gas 1-5,371 ..... dry

CUYAHOGA COUNTY

Strongville—W. C. Fetterman, Dillon & McFredericks 1 ..... dry

KNOX COUNTY

Union—J. B. White, Upham Gas 2 .... gas

COSHOCTON COUNTY

Perry—Clay Tatten, Preston Oil 1-1,476 gas
W. A. Little, Preston Oil 1-1,477 6
Chas. O. Mercer, Preston Oil 1-478 .. dry

Wells completed 3
Production 6
Dry 1
Gas 1

MUSKINGUM COUNTY

Wayne—E. F. Frick, Ohio Fuel Gas 1-5,412 ..... gas
Washington—Ben F. Slick, Ohio Fuel Gas 1-5,402 ..... gas

Wells completed 2
Gas 2

ATHENS COUNTY

Ames—T. M. Fleming, Ohio Fuel Gas 2-5,480 ..... gas
York—Hocking-Athens Coal, Porter Bros. 10 ..... dry
Lee—Lizzie Robinet, Letonia Oil & Gas 1 ..... dry
Waterloo—P. R. Devore, Grass Run Oil & Gas 2 1

Wells completed 4
Production 1
Dry 2
Gas 1

STARK COUNTY

Jackson—W. H. Dailey, Penn Oil & Gas 1 ..... gas
J. C. Easterday, Medford Oil & Gas 1 gas
T. K. Harris, East Ohio Gas 2 ..... gas
Tom O'Shanter Golf, East Ohio Gas 1 gas

Wells completed 4
Gas 4

GUERNSEY COUNTY

Millwood—L. C. Stewart, Geo. Jewell & Co. 1 ..... dry

LIMA

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Wood	0	0	0	0	1	0	1
Hancock	1	70	0	0	0	1	1
Auglaize	1	0	1	0	0	0	0
Mercer	0	0	0	0	0	1	1
Sandusky	0	0	0	0	0	1	1
Seneca	2	0	0	2	0	5	5
Lucas	0	0	0	0	0	2	2
Ottawa	0	0	0	0	1	2	3
Hardin	3	90	0	2	4	3	7
Shelby	0	0	0	0	0	1	1
Huron	1	0	0	1	0	0	0
Wyandot	0	0	0	0	0	3	3
Henry	1	0	0	1	0	5	5
Ttl. Apr.	9	160	1	6	6	24	30
Ttl. Mar.	11	135	2	8	4	18	22
Difference	2	25	1	2	2	6	8

WELLS COMPLETED

WOOD COUNTY

Montgomery—Holliday-Hamilton, Ohio Oil 22, 23, 27, 31, 33, 33, 29, 30 .... abd
A. L. Bordner, Ohio Oil 4, 5, 6, 7, 8.. abd
G. W. Butler, Ohio Oil 2, 3, 4, 5..... abd
J. Adams South, Ohio Oil 3, 4, 6, 7, 9, 12, 13, 14 ..... abd
Freedom—S. E. Tilton, Ohio Oil 1, 2, 3, 4, 6, 8 ..... abd
Fuhr-Villwock, Ohio Oil 6, 13, 15, 22, 39, 53, 58, 95 ..... abd
Fuhr-Villwock, Ohio Oil 103, 104, 114, 115 ..... abd

Abandoned 43

HANCOCK COUNTY

Biglick—Elnora Cross, Ridge Oil & Gas Synd. 5 70
Liberty—C. Ewing, Ohio Oil 2, 10 .... abd
H. A. Bauer, Herman A. Bauer 1 ... abd
Cass—Geo. Nelson, Ohio Oil 1, 3, 4, 6.. abd
Sam Swab No. 3, Trustee 1, 2 ..... abd
Jas. E. Hudson, Ohio Oil 4, 5, 9, 10, 13, 14, 15 ..... abd

Wells completed 1
Production 70
Abandoned 16

AUGLAIZE COUNTY

Noble—G. & M. Schillinger, Harry Manion & Co. 1 ..... dry

MERCER COUNTY

Granville—S. Lauber, John Lauber 1, 2 abd

Abandoned 2

SANDUSKY COUNTY

Madison—Ed. Davis, Ohio Oil 1, 2 .... abd
H. Myers No. 2 tr., Ohio Oil 1 ..... abd
Scott—J. D. Hathaway, North Ohio Oil 1, 2, 3, 4, 5, 6 ..... abd

Abandoned 9

SENECA COUNTY

Liberty—Wilson Betts estate, Sandusky Gas 2 ..... gas
Hopewell—Geo. Doran, Sandusky Gas 2 gas

Wells completed 2
Gas 2

DARKE COUNTY

Mississinewa—Clara Ludy, Spencer & Pontius 1 ..... abd

HARDIN COUNTY

Pleasants—B. G. and E. V. Oats, Abbott Bros. 1 ..... gas
Cessna—Grant Geiger, Wiser Oil 4 90
A. W. Kritzler, Appalachian Gas Corp. 2 ..... gas

Wells completed 3
Production 90
Gas 2

HURON COUNTY

Fitchville—Garrett Verberg, Gebhart, Fraker & Co. 1 ..... gas

HENRY COUNTY

Damascus—E. Buel Fiser, Lake Shore and S. W. O. & Metal 1 ..... gas

EASTERN FIELDS

Summary of Completed Work

Field—	Comp.	Prod.	Dry	Gas
Allegany	3	7	0	0
Bradford	9	16	0	0
Venango-Clarion	3	3	0	2
Middle Field	3	7	0	0
Butler-Armstrong	1	1	0	0
Tioga	17	0	7	10
S. W. Pennsylvania	5	0	3	2
Southeast Ohio	20	36	9	4
West Virginia	29	8	5	20
Total April	90	77	24	38
Total March	162	504	36	79
Difference	72	427	12	41

Summary of Work Under Way

Field—	Rigs	Drlg.	Ttl.
Allegany	1	5	6
Bradford	3	10	13
Venango-Clarion	0	5	5
Middle Field	0	1	1
Butler-Armstrong	1	3	4
Tioga	15	45	60
Southwest Pennsylvania	0	7	7
Southeast Ohio	14	24	38
West Virginia	6	42	48
Total April	40	142	182
Total March	58	123	181
Difference	18	19	1

ALLEGANY

Fee, Grow Farm Oil Co. ..... pres
Fee, Ryder and Richmond Oil Corp.... 2
Childs, First National Bank of Olean 4 5

Wells completed 3
Production 7
Pressure 1

BRADFORD FIELD

Cory, Wal Oil & Gas Co. 1
Griffith, E. C. Tanner 5
Quintuple, Frank Fesenmyer 2
Melvin, South Penn Oil Co. 1
Borden, T. P. Thompson, Jr. ..... pres
Farm 4.117, South Penn Oil Co. ..... pres
Fee, Ajax Oil Co. 1
O'Neil, Ball & Ryan 4
Fee, Healey Petroleum Corp. 1

Wells completed 9
Production 16
Pressure 2

VENANGO-CLARION

Swab, United Natural Gas Co. 3,994.... gas
Kapp, Fryburg Motor Co. 5..... gas
Sheffer, J. H. Sheffer 1..... 2

Wells completed 3
Production 2
Gas 2

MIDDLE FIELD

Irvine, C. E. Potter 1
Kapp, Kervin & Yerdon 1
Clapp, William Myers 17..... 1

Wells completed 2
Production 7

BUTLER-ARMSTRONG

Smith, Dow Smith 1 1

TIOGA FIELD

Kemp, Allegheny Gas Co. ..... dry

Bertch, Hope Engineering Co. ..... dry
Ackley, Lycoming Natural Gas Co. ..... dry
Deming, Belmont Quadrangle Co. ..... gas
Ford, Cunningham Drilling Co. ..... dry
Fee, Ball & Boyle ..... gas
Densenberg, J. T. Cunningham ..... gas
Fee, Furnace Oil Co. ..... gas
Miller, Dougan et al ..... gas
Hawk, J. T. Cunningham ..... gas
Harrison, Leonard Oil Co. ..... dry
Turner, Crescent Producing Corp. ..... gas
Eveland, Cunningham Oil Co. ..... gas
Gordon, Sone-Kemp ..... gas
Engle, Unknown ..... gas
Farcus, Reserve Oil Co. ..... dry

Wells completed 17
Dry 7
Gas 10

SOUTHWEST PENNSYLVANIA

WELLS COMPLETED

GREENE COUNTY

Scott, Mfrs. L. & H. 1 ..... gas
Haines, Peoples Nat. Gas 1 ..... dry

WASHINGTON COUNTY

Moniger, Carnegie Nat. Gas 1 ..... dry
Dunbar, William Dillmyer & Co. 1 .... gas
Taggart, E. J. Young & Co. 3 ..... dry

SOUTHEAST OHIO

COMPLETIONS

ASHLAND COUNTY

Spreng, Great Lakes Oil 1 ..... dry
Horn, G. Tal ot et al 3 ..... ½
Mosher, Great Lakes Oil 1 ..... dry

ATHENS COUNTY

Devore, Grass Run Oil & Gas 2 1
Bratton, Leetonia O. & G. 1 ..... dry

BELMONT COUNTY

Smith, Belmont Drlg. et al 1 ..... dry

COLUMBIANA COUNTY

Miller Brothers, Miller Oil 1 ..... gas

COSHOCTON COUNTY

Little, Preston Oil 1 6
Mercer, Preston Oil 1 ..... dry
Tatten, Preston Oil 1 ..... gas
Cochran, Preston Oil 1 ..... gas

CUYAHOGA COUNTY

Haynes, Dillon & McFrederick 1 ..... dry

HOLMES COUNTY

Miller, Ohio Fuel Gas 1 ..... dry

MEDINA COUNTY

Bowman, Ohio Fuel Gas 1 ..... dry
Packard, E. R. Edson & Son Co. 13 10
Franks, E. R. Edson & Son Co. 16 15

MUSKINGUM COUNTY

Frick, Ohio Fuel Gas 1 ..... gas

NOBLE COUNTY

Rich, C. W. Rich et al 2 2

WASHINGTON COUNTY

Dutton, Massilon Macksburg Oil 1 .... 1½

JEFFERSON COUNTY

Elliott, Elliott & Co. 1 ..... dry

WEST VIRGINIA

COMPLETIONS

BOONE COUNTY

Federal Coal Co., Pure Oil 50 ..... gas
Federal Coal Co., Pure Oil 51 ..... gas
Sutphin, Pure Oil 4 ..... gas
Federal Coal Co., Godfrey L. Cabot 45. gas
Youghioghney & Ohio Coal Co., Godfrey L. Cabot 7 ..... dry

CABELL COUNTY

Sunderland, W. H. Kirtley & Co. 1 ... gas

CALHOUN COUNTY

Poling, Mid Penn Oil 1 ..... gas
Jackson, Park Bowser 2 ..... gas
Shroyer, United Fuel Gas 1 ..... gas
Pell, B. J. Crowley 1 ..... gas
St. Paul Church lot, Creed Barker et al gas
Shaffer, Hope Nat. Gas 7,518 ..... gas

CLAY COUNTY

Thompson Land & Coal Co., H. B. Davenport 3 ..... gas

GILMER COUNTY

Ralston, Bowser Oil 2 ..... dry
Hardman, Cap Davis et al 1 ..... dry

HARRISON COUNTY

Morris, J. W. Johnson et al 1 2
Scott, Reserve Gas 343 ..... gas

JACKSON COUNTY

Starr, J. H. Starr et al 1 ..... gas

KANAWHA COUNTY

Sunday Creek Coal Co., United Fuel Gas 4,268 ..... gas

LINCOLN COUNTY

Miller, United Fuel Gas 4,312 ..... gas

MARSHALL COUNTY

Doman et al, Mfrs. L. & H. 3,470 .... gas
Chambers, Mfrs. L. & H. 2,994 ..... gas

PLEASANTS COUNTY

Boyd heirs, First Nat. Bank of St. Marys 7 1

ROANE COUNTY

Rader, Parsons Oil & Gas 1 ..... dry

WETZEL AND TYLER COUNTIES

Bartrug, Mfrs. L. & H. 3,478 ..... gas
Midcap, Curtis Smith & Co. 1 ..... oil
Parks, Mfrs. L. & H. 3,449 ..... gas

WAYNE COUNTY

Streuber, Chartiers Oil 2 2
Wilson heirs, Wayne United Gas 44 ... gas

ILLINOIS FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Clark	0	0	0	0	0	2	2
Cumberland	0	0	0	0	0	1	1
Crawford	0	0	0	0	3	1	4
Lawrence	0	0	0	0	0	0	0
Wabash	0	0	0	0	0	1	1
Coles	0	0	0	0	0	1	1
Edgar	0	0	0	0	0	1	1
St. Clair	0	0	0	0	0	3	3
Effingham	0	0	0	0	0	1	1
Randolph	0	0	0	0	0	2	2
Monroe	0	0	0	0	0	2	2
Washington	0	0	0	0	0	1	1
Clinton	0	0	0	0	0	2	2
Boone	0	0	0	0	0	1	1
Madison	0	0	0	0	0	2	2
Marion	0	0	0	0	0	1	1
Ttl. Apr.	0	0	0	0	3	22	25
Ttl. Mar.	5	28	3	0	4	16	20
Difference	5	28	3	0	1	6	5

INDIANA

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Jay	0	0	0	0	0	1	1
Adams	0	0	0	0	0	1	1
Huntington	0	0	0	0	0	3	3
Gibson	0	0	0	0	0	2	2
Pike	1	0	1	0	0	4	4
Daviess	0	0	0	0	0	6	6
Vigo	1	0	1	0	0	0	0
Sullivan	1	0	1	0	0	3	3
Warrick	1	0	1	0	0	1	1
Spencer	3	60	1	0	0	7	7
Perry	1	5	0	0	0	5	5
White	0	0	0	0	0	1	1
Marshall	0	0	0	0	1	1	2
Monroe	1	0	0	1	0	3	3
Knox	0	0	0	0	0	3	3
Lagrange	0	0	0	0	0	1	1
Posey	0	0	0	0	0	1	1
Putnam	0	0	0	0	0	1	1
Laporte	0	0	0	0	0	1	1
DeKalb	0	0	0	0	0	1	1
Rush	0	0	0	0	0	2	2
Floyd	0	0	0	0	0	1	1
Vandeburg	1	10	0	0	3	1	4
Hancock	0	0	0	0	0	2	2
Elkhart	0	0	0	0	1	1	2
Porter	1	0	1	0	0	0	0
Lake	0	0	0	0	0	1	1
Harrison	0	0	0	0	0	1	1
Hamilton	0	0	0	0	1	0	1
Shelby	0	0	0	0	0	1	1
Ttl. Apr.	11	75	6	1	6	55	61
Ttl. Mar.	13	58	5	4	3	53	56
Difference	2	17	1	3	3	2	5

WELLS COMPLETED

PIKE COUNTY

Washington — Wm. Lamb, Chas. C. Taliferro, Jr. 2 ..... dry

VIGO COUNTY

Prairie Creek—W. P. Collins, Thomas & Ellis 1 ..... dry

SULLIVAN COUNTY

Haddon—Walters, Wade Connelly & Co. 1 ..... dry

WARRICK COUNTY

Anderson—White, Morris Oil Co. 1.... dry

SPENCER COUNTY

Troy Pool—Mary Berg, Santa Fe Oil 2 30
Wm. Grass, Leggett & Mellon 1..... 30
Phillips hrs., Seitz & Medley 1..... dry

Wells completed 3
Production 60
Dry 1

PERRY COUNTY

Clark—Lee Aders, Conyers & Bugg 1.. 5

MONROE COUNTY

Benton—Jacob Neal, Ohio O'l 1..... gas

VANDEBERG COUNTY

Center—Geo. Hornby, Vandeburg Oil 3. 10

PORTER COUNTY

North of Valparaiso—Arthur Hanrahan, San Juan Coal & Oil 1..... dry

MICHIGAN FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Muskegon	0	0	0	0	1	5	6
Isabella	3	490	0	0	26	38	64
Midland	1	0	1	0	4	14	18
Clare	0	0	0	0	4	2	6
Mecosta	0	0	0	0	1	0	1
Lake	0	0	0	0	0	2	2
Cass	0	0	0	0	0	2	2
Kent	0	0	0	0	1	2	3
Ottawa	0	0	0	0	0	2	2
Oceana	0	0	0	0	1	5	6
Bay	0	0	0	0	1	1	2
Mason	0	0	0	0	0	4	4
Newaygo	1	0	1	0	0	5	5
Emmett	0	0	0	0	0	1	1
Eaton	0	0	0	0	1	0	1
Kalkasky	0	0	0	0	1	1	2
Monroe	2	0	0	2	0	2	2
Iosco	0	0	0	0	2	0	2
Missaukee	0	0	0	0	1	0	1
Washtenaw	1	0	0	1	0	2	2
Delta	0	0	0	0	1	0	1
Montmorency	0	0	0	0	1	0	1
Van Buren	0	0	0	0	0	2	2
Sanilac	0	0	0	0	3	0	3
Gratiot	0	0	0	0	3	3	6
Shiwassee	0	0	0	0	2	2	4
Livingston	0	0	0	0	1	2	3
Allegan	0	0	0	0	2	4	6
Cheboygan	0	0	0	0	0	1	1
Leelanau	0	0	0	0	1	0	1
Osceola	0	0	0	0	1	0	1
St. Clair	0	0	0	0	2	0	2
Gennessee	0	0	0	0	1	0	1
Alpena	0	0	0	0	0	1	1
Ogemaw	0	0	0	0	1	0	1
Ttl. Apr.	8	490	2	3	63	103	166
Ttl. Mar.	5	133	1	2	46	109	146
Difference	3	357	1	1	17	3	20

WELLS COMPLETED

ISABELLA COUNTY

Chippewa—Iosco Land, Pure Oil Co. 3-8 45
Sawade, Pure Oil Co. 2 45
Denver—Anton Wezensky, Ohio Prod. & Ref. 2 400

Wells completed 3
Production 490

MIDLAND COUNTY

Greendale—Sias-Rinehart, Pure Oil Co. 4 ..... dry

NEWYAGO COUNTY

Everette—A. E. Douglas, Butler Oil Synd. 1 ..... dry

MONROE COUNTY

London—Fee, Leonard Federer 1 ..... gas
Barnes, P. Barnes 1 ..... gas

Wells completed 2
Gas 2

WASHTENAW COUNTY

Augusta—E. W. Bordine, Earnest W. Bordine 1 ..... gas

FRENCH IN COLOMBIA

The European Petroleum Co., a new French oil company, has been incorporated in Colombia to explore and exploit petroleum deposits of the state of Carare. The company has been formed as the result of preliminary efforts of a financial group organized in 1929. Its principal shareholders, in addition to the organizers, are nine prominent French corporations, including Raffinerie de Pechelbronn, Societe Brest, Port Petroliere and Societe de Petroles, Essences et Naphtes. The four refineries in the group have a refining capacity of more than 25,000 bbls. daily.

SEEK OIL IN FRENCH CONGO

Agreements have been reached between the French National Office for Liquid Fuels and the government of the French Congo to start a geological and topographical survey in French Equatorial Africa.

INDIA'S IMPORTS FROM U. S.

During 1930 British India imported 650,014 bbls. of kerosene and 464,102 of lubricating oils from the United States, compared with 672,832 bbls. of kerosene and 461,125 of lubricating oils in 1929.

COLOMBIA'S PRODUCTION

During March, Colombia produced 1,774,865 bbls. of crude petroleum and exported 1,746,454 bbls.

LEGAL

Department of the Interior, Washington. Call for bids to Purchase Royalty Oil and Royalty wet gas accruing to the United States from the North Dome, Kettleman Hills, California, oil and gas field. Pursuant to the provisions of Section 36 of the act approved February 25, 1920 (41 Stat., 437), sealed proposals, in duplicate, will be received in the office of the Secretary of the Interior, Washington, D. C., on or before noon on June 1, 1931, from responsible bidders for the purchase, for a period beginning July 1, 1931, of all royalty oil and of all royalty wet gas accruing to the United States from Government lands in the North Dome, Kettleman Hills, California, oil and gas field. Information as to the approximate quality and quantity of the oil and wet gas offered for sale may be obtained from the Director, Geological Survey, Department of the Interior, Washington, D. C., or the Supervisor, Geological Survey, Taft, California. Bids are invited on six separate items as follows: Item 1.—Royalty oil for the period beginning July 1, 1931, and ending March 31, 1932. Item 2—Royalty oil for the period beginning July 1, 1931, and ending March 31, 1934. Item 3—Royalty oil for the period beginning July 1, 1931, and ending March 31, 1936. Item 4—Royalty wet gas for the period beginning July 1, 1931, and ending March 31, 1932. Item 5—Royalty wet gas for the period beginning July 1, 1931, and ending March 31, 1934. Item 6—Royalty wet gas for the period beginning July 1, 1931, and ending March 31, 1936. Bids for oil must be a differential stated in cents per barrel over the average monthly field price received for all other oil produced in said field by the Kettleman North Dome Association, and bids for wet gas may be stated either as a flat rate in cents per thousand cubic feet or as such flat rate plus a differential in cents per gallon of gasoline content. Delivery of royalty oil and royalty wet gas will be made in the field by the Kettleman North Dome Association without cost to the Government to the successful bidder or for his account. Payments for the royalty oil and royalty wet gas are to be made to the Register of the United States Land Office, Sacramento, California, on or before the fifteenth day of each month following that in which delivery is made. The quantity and quality of the oil will be determined by tests, corrected for impurities, and the volume computed in terms of standard barrels at 60° F.; the quantity of gas will be determined by orifice meters using a standard pressure base of 14.73 pounds per square inch and standard temperature of 60° F., and the gasoline content of gas will be determined by standard charcoal or other tests satisfactory to the Government. Each bidder must submit with his bid a bond in the sum of $1,000 or a certified check payable to the order of the Secretary of the Interior in the sum of $1,000 as a guarantee that he will, if successful, promptly execute a satisfactory contract and furnish a bond in the sum of at least $100,000, conditioned upon full and complete compliance with the terms of the contract. The Secretary of the Interior may accept the offer of the highest bidder and/or bidders and reserves the right to reject all bids whenever within his judgment the interest of the United States demands. Sealed bids are to be submitted to the Secretary, Department of the Interior, Washington, D. C., the envelope to be marked plainly "Bid on Kettleman Hills royalty oil" and/or "Bid on Kettleman Hills royalty wet gas." No bid received after the time herein fixed for submitting bids will be considered. (Sgd.) Ray Lyman Wilbur, Secretary of the Interior. April 23, 1931.

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TEXAS OIL MAPS
County and District Catalog on Application
HEYDRICK MAPPING COMPANY
Wichita Falls, Texas

Read the Classified Bargains on Pages 100-101 and 103

Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS

Pipe Line Statement for March Runs

	Month (bbls.)	Dy.av. (bbls.)
Prairie Pipe Line Co.*....	995,100	32,100
Gulf Pipe Line Co.	1,231,758	39,734
The Texas Pipe Line Co. of Okla.	679,836	21,930
Magnolia Pipe Line Co...	1,518,727	48,991
Cosden Pipe Line Co.	744,653	24,021
Empire Pipe Line Co. ...	1,881,298	60,687
Stanolind Pipe Line Co.*.	3,224,000	104,000
Oklahoma Pipe Line Co..	2,459,757	79,347
Other lines*	7,068,000	228,000
Total, March	19,803,129	638,810
Total February	17,138,296	612,082
Difference	2,664,833	26,782

Shipments

Prairie Pipe Line Co.† ...	2,095,817	67,607
Gulf Pipe Line Co.	1,562,856	50,415
Texas Pipe Line Co. of Okla.	1,262,632	40,730
Magnolia Pipe Line Co. ..	1,286,452	41,495
Cosden Pipe Line Co.	699,793	22,574
Empire Pipe Line Co.	1,797,431	57,982
Stanolind Pipe Line Co.† .	3,534,651	114,021
Oklahoma Pipe Line Co..	2,424,293	78,203
Other lines*	7,099,000	229,000
Total March	21,762,925	702,030
Total February	19,021,830	678,460
Difference	2,741,035	23,570

Stocks

Prairie Oil & Gas Co.	37,274,000
Gulf P. L. & Gypsy Oil Co.	8,710,058
The Texas Company	3,821,029
Magnolia Petroleum Co.	6,323,742
Mid-Continent Petr. Corp.	2,737,883
Empire Pipe Line Co.	5,405,052
Stanolind Crude Oil Pur. Co.	18,306,000
Oklahoma Pipe Line Co.	2,563,570
Carter Oil Co.	8,888,504
Other lines	22,175,000
Total March	117,204,838
Total February	118,434,267
Difference	1,229,399

*Estimated. †Prairie and Stanolind shipments include Texas crude oil.

EASTERN PIPE LINE REPORT FOR APRIL

Runs from Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky, Illinois, Indiana and Michigan for March and April:

	Mar., '31	Apr., '31
Nat. Transit	137,918.13	142,938.57
S W Pa. P. L.	73,145.44	75,998.00
Eureka P. L.	294,873.99	294,234.07
Buckeye P. L. (Macksburg) ...	311,712.85	300,478.22
Buckeye P. L. (Cleveland)	11,769.49	11,192.35
Buckeye P. L. (Lima, etc.)	79,000.44	78,452.79
Indiana P. L.	3,199.09	2,975.41
Cumberland P. L...	168,106.26	166,133.49
N. Y. Transit	28,392.78	28,562.30
Tide Water P. L. .	24,005.40	27,008.85
Pure Oil	212,358.30	195,221.33
Stoll Oil Refining .	32,191.99	.....
Bradford Transit .	307,597.03	321,147.01
Total	1,684,271.08	1,647,436.50
Daily average ..	54,331.32	54,914.55

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for March and April:

	Mar., '31	Apr., '31
Nat. Transit	565,089.04	480,757.15
S W Pa. P. L. ..	423,661.54	386,704.21
Eureka P. L.	328,329.66	200,604.46
Buckeye P. L. (Macksburg) ...	265,351.57	230,921.29
Buckeye P. L. (Cleveland) ...	2,440.89	2,198.31
Buckeye P. L. (Lima, etc.)	1,601,658.90	1,677,678.11
Indiana P. L.	737,237.17	998,276.65
Cumberland P. L. .	110,949.07	108,989.29
Southern P. L. ..	79,090.42	20,351.93
N. Y. Transit	187,287.69	174,908.27
Northern P. L. ..	177,499.13	165,693.77
Tide Water P. L. .	362,962.53	451,375.06
Pure Oil Co.	246,505.63	228,993.49
Bradford Transit .	341,249.76	324,367.08
Tuscarora	443,677.56	283,195.69
East Gulf Oil	1,674.23	3,094.01
Total	5,874,764.79	5,743,508.77
Daily average ...	189,508.54	191,450.29

Gross Stocks

The gross stocks held by various pipe lines in the oil-producing section of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky and Indiana at the close of March and April:

	Mar., '31	Apr., '31
Nat. Transit	745,113.23	790,741.10
S. W. Pa. P. L. ..	369,482.29	535,721.14
Eureka P. L.	1,819,344.51	1,762,107.52
Buckeye P. L. (Macksburg)	565,767.95	513,877.24
Buckeye P. L. (Cleveland)	49,352.24	46,073.53
Buckeye P. L. (Lima, etc.)	3,619,980.13	3,730,603.33
Indiana P. L.	611,627.34	602,583.09
Cumberland P. L..	652,425.69	659,658.19
Southern P. L. ...	270,576.36	312,317.70
N. Y. Transit	148,013.40	109,007.83
Northern P. L. ..	343,330.93	291,059.44
Tide Water P. L. .	1,030,157.40	900,197.73
Pure Oil	625,331.52	604,079.70
Tuscarora	13,347.56	13,173.80
Bradford Transit ..	143,165.00	164,714.48
East Gulf Oil	4,647.01	4,071.47
Total	11,012,162.56	11,044,487.59
Decrease	494,327.43	.....
Increase	.....	32,325.03

Grades of Oil

The following table shows the amount of the different grades of oil held by the Eastern pipe lines at the close of March and April, showing gross stocks of the above fields:

	Mar., '31	Apr., '31
Pennsylvania	3,847,629.68	3,966,991.51
Lima	791,559.81	809,789.51
Kentucky	667,373.51	674,030.47
Mid-Continent	5,090,403.22	4,984,054.76
Illinois	.....	16,978.53
Michigan	615,196.34	592,642.76
Total	11,012,162.56	11,044,487.59

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1928	1929	1930	1931
Jan.	52,904	51,749	75,907	53,939
Feb.	57,002	51,833	79,256	55,163
Mar.	57,485	54,252	76,658	54,331
Apr.	56,813	58,444	84,536	54,914
May	62,007	59,902	80,548	.....
June	58,230	58,333	75,430	.....
July	57,144	66,087	68,921	.....
Aug.	57,745	66,087	54,291	.....
Sept.	53,487	67,315	56,595	.....
Oct.	58,100	76,093	58,179	.....
Nov.	53,865	74,831	52,332	.....
Dec.	52,035	74,561	53,999	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1928	1929	1930	1931
Jan.	146,465	165,721	217,623	175,369
Feb.	167,365	159,387	224,355	183,494
Mar.	158,833	161,474	228,546	139,508
Apr.	172,935	169,737	241,845	191,450
May	180,559	184,281	243,283	.....
June	188,024	185,404	234,401	.....
July	189,470	194,763	207,094	.....
Aug.	192,853	194,946	205,506	.....
Sept.	194,138	201,214	193,999	.....
Oct.	176,000	191,367	157,675	.....
Nov.	176,898	202,742	146,638	.....
Dec.	173,572	186,257	143,001	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines at the close of each month for the past three

	1929	1930	1931
Jan.	7,596,564	12,220,045	11,831,093
Feb.	8,738,835	12,991,661	11,506,489
Mar.	9,002,058	13,247,317	11,912,162
Apr.	8,978,172	13,333,961	11,044,487
May	8,903,560	13,052,953	.....
June	8,921,275	13,396,855	.....
July	9,211,595	13,268,562	.....
Aug.	9,440,643	13,047,051	4
Sept.	9,443,067	12,812,018	.....
Oct.	9,441,101	12,437,555	.....
Nov.	9,868,538	11,851,380	.....
Dec.	11,253,953	11,761,952	.....

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, May 1	644,216.76
Runs from wells	394,806.10
Other receipts	23,966.66
Regular deliveries	255,523.77
Other deliveries	165,979.13

The amount of Illinois oil run by the Tide Water Pipe Co. in April was 27,008.88 bbls. Deliveries were 27,008.88 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

1931—	Runs	Deliveries
April	421,814.98	282,532.65
1930—		
January	542,387.95	498,293.93
February	548,416.33	414,536.59
March	631,944.49	469,119.53
April	530,074.22	509,394.60
May	605,147.37	504,069.84
June	572,662.57	468,658.81
July	604,529.54	388,454.47
August	594,642.12	375,742.43
September	457,001.11	371,691.63
October	478,442.12	320,688.73
November	422,794.68	355,403.12
December	556,418.78	363,719.55
1931—		
January	463,429.04	669,573.19
February	429,284.54	461,262.85
March	424,658.23	356,663.26

Tide Water Pipe Co., Ltd., also delivered in April 685,176.81 bbls. Oklahoma oil.

AVERAGE DAILY RECEIPTS OF CALIFORNIA CRUDE AND REFINED OIL AT ATLANTIC AND GULF PORTS

Average barrels per day in 1930-31—	ATLANTIC PORTS						GULF COAST PORTS						
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans, Baton Rouge	Port Arthur, Sabine Pass	Tampa	Total	Total all ports
May	5,194	8,451	28,161	9,484	2,774	54,064	.....	.....	.....	.....	774	54,838
June	8,300	.....	32,933	20,767	2,333	65,333	.....	.....	.....	.....	2,400	67,733
July	17,355	7,774	43,419	23,839	6,452	98,839	.....	.....	.....	.....	4,645	103,484
August	7,413	8,742	38,968	21,336	5,253	81,613	.....	.....	.....	.....	97	81,710
September	6,300	6,400	25,600	13,400	9,567	61,267	.....	.....	.....	.....	2,432	63,700
October	2,516	3,065	27,258	16,419	4,903	54,161	.....	.....	.....	.....	5,355	59,516
November	5,367	6,233	33,800	17,733	4,600	70,733	.....	.....	.....	.....	4,800	75,533
December	5,516	4,333	30,645	9,678	3,580	53,742	.....	.....	.....	.....	4,645	58,387
January	8,887	6,613	21,968	14,678	11,096	62,742	.....	.....	.....	.....	6,129	68,871
February	5,787	2,713	29,143	4,000	5,750	47,393	.....	.....	.....	.....	3,750	51,143
March	10,022	1,611	21,388	7,324	8,774	49,139	.....	.....	.....	.....	6,355	55,484
April	5,133	.....	19,300	16,500	10,067	50,900	.....	.....	.....	.....	4,000	54,900

AVERAGE DAILY IMPORTS OF CRUDE AND REFINED OIL AT PRINCIPAL UNITED STATES PORTS

Average barrels per day in 1930-31—	ATLANTIC PORTS						GULF COAST PORTS					
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans, Baton Rouge	Port Arthur, Sabine Pass	Tampa	Total	Total all ports
May	24,129	9,322	174,194	39,291	28,226	275,161	3,194	11,548	2,935	1,323	24,000	299,161
June	51,533	15,667	121,067	45,033	25,033	258,333	4,413	17,367	3,167	1,333	25,300	283,633
July	42,097	9,548	154,968	37,935	26,033	280,580	5,678	9,161	2,097	2,387	19,323	299,903
August	29,033	4,484	145,613	33,355	35,097	247,581	3,419	9,323	3,548	2,000	23,290	270,871
September	38,867	8,533	150,933	24,500	25,567	258,400	6,433	12,324	.....	2,800	22,467	280,867
October	19,339	11,742	146,194	35,355	26,967	240,097	6,065	7,067	2,774	2,545	18,451	258,548
November	39,633	35,900	124,633	36,467	24,667	261,300	2,467	7,366	.....	1,767	11,600	272,900
December	31,419	14,033	122,774	32,839	23,774	224,839	6,290	10,613	2,097	290	19,290	244,129
January	17,613	13,519	154,225	32,903	30,612	248,871	2,032	11,677	2,097	1,097	18,903	267,774
February	31,321	16,929	127,786	31,714	26,857	234,607	4,536	11,571	.....	536	16,643	251,250
March	27,645	16,935	141,160	24,290	21,129	238,161	4,065	2,580	.....	1,968	8,613	246,774
April	35,000	10,533	105,000	29,767	35,533	215,833	2,733	3,400	.....	.....	6,133	221,966

GROSS PRODUCTION OF CRUDE OIL IN THE UNITED STATES FOR 12 MONTHS

(In Barrels of 42 Gallons)

1930—		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mts.	Eastern	Total
April:	Month	18,768,743	19,541,310	24,799,763	3,734,352	1,724,460	1,909,553	2,334,810	4,257,000	77,069,891
	Daily average	625,625	651,377	826,659	124,475	57,482	63,652	77,827	141,900	2,568,998
May:	Month	19,044,444	20,537,503	26,219,488	3,975,335	1,859,395	1,907,482	2,565,219	4,414,000	80,376,776
	Daily average	614,337	664,113	845,786	128,235	59,545	61,543	82,749	142,387	2,593,799
June:	Month	18,020,795	19,754,700	25,643,705	3,765,060	1,704,060	1,925,621	2,519,190	4,288,000	77,621,131
	Daily average	600,693	658,490	854,790	125,502	56,802	64,187	83,973	142,933	2,587,371
July:	Month	18,802,024	18,022,514	25,973,521	3,541,409	1,713,680	2,079,769	3,275,894	3,820,000	77,248,811
	Daily average	606,517	581,694	837,856	114,239	55,280	67,089	105,674	123,548	2,491,597
August:	Month	18,770,466	17,162,034	25,069,598	3,491,530	1,700,102	3,161,120	3,193,241	3,417,000	74,965,191
	Daily average	605,499	553,614	808,696	112,630	54,842	69,391	103,011	110,226	2,417,909
September:	Month	17,584,306	16,599,130	23,111,823	3,405,510	1,583,280	2,003,060	3,239,010	3,396,000	71,287,108
	Daily average	599,477	580,304	770,394	113,517	52,776	66,935	107,967	113,200	2,374,570
October:	Month	18,244,053	16,632,523	23,626,553	3,571,911	1,636,552	2,142,885	3,225,550	3,627,000	72,707,029
	Daily average	588,518	536,533	762,147	115,223	52,792	69,125	104,050	117,000	2,346,188
November:	Month	18,109,459	14,941,770	22,035,223	3,459,330	1,557,870	2,126,948	3,057,100	3,322,000	68,419,699
	Daily average	603,648	498,059	734,507	115,311	51,929	71,231	101,570	107,400	2,280,650
December:	Month	17,786,728	15,057,103	21,810,369	3,432,661	1,590,951	2,167,534	3,118,663	3,326,000	68,281,999
	Daily average	573,765	485,713	703,560	110,731	51,321	69,598	100,602	107,355	2,202,645
1931—										
January:	Month	16,485,793	14,350,953	20,690,452	3,149,072	1,574,955	2,131,937	2,966,143	3,374,000	65,223,310
	Daily average	531,793	479,063	667,435	101,583	50,805	68,772	95,682	108,839	2,103,978
February:	Month	14,930,933	12,371,876	18,964,596	3,369,016	1,462,492	1,981,476	2,747,024	3,139,000	59,896,413
	Daily average	533,248	477,567	677,307	120,322	52,232	70,767	98,108	111,750	2,139,158
March:	Month	16,364,842	16,430,341	22,975,309	3,498,598	1,444,941	2,012,197	2,897,725	3,374,000	69,019,263
	Daily average	527,898	530,011	741,139	112,858	46,611	65,587	93,475	108,839	2,226,428
Total 12 months		213,312,590	202,871,747	280,920,368	42,396,738	19,393,235	24,545,941	35,039,668	42,656,000	862,056,630